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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR SEPTEMBER.

O, goodness, every year made new!
O, gifts, with rain and sunshine sent!
Thy bounty overruns our due,
Thy fulness shames our discontent. WHITTIER.

SEPTEMBER, the first of the Autumn Months, is again with us, and again do we witness on all hands the evidences of another of those fulfilments of the promise that "seed time and harvest shall never cease," which, while they are designed to be sufficient to stimulate hope and to encourage the putting forth of those efforts on our part which are made the condition of the promise, are not intended to be positive enough to warrant that kind of faith which seeks to manifest itself "without works." Not knowing, positively, whether this or that should prosper, we cast in the seed, with just enough of hope to give us courage to work bravely, and with just enough of fear to make us realize that we are but co-workers with a higher Power, on whom we are dependent for the increase, however carefully we may plant.

"O, Painter of the fruits and flowers,
We thank Thee for Thy wise design,
Whereby these human hands of ours
In Nature's garden work with Thine.
And thanks that from our daily need
The joy of simple faith is born;
That he who smites the summer weed
May trust Thee for the autumn corn."

September is, in many respects, one of the most pleasant months of the year, being, in this climate, an agreeable compound of summer and fall weather—of warm days and cool nights. The work of summer and the work of fall, as well as the climate of the two seasons, seems to begin and end during this month, or rather, we may say, are divided by it. The harvesting of our English grains and the gathering of our early fruits occur during the season of haying, which, in many sections of New England, includes the early part of September; while the gathering of the later fruits, digging of potatoes and other roots, with the harvesting of the corn crop, are deferred to the next month, or to quite the last of this. The good farmer, therefore, should find in September, not a mere boundary line only, but a liberal vacation between summer work and fall work. A vacation not for idleness, not so much even for relaxation as for active efforts for the accomplishment of certain well-considered and perhaps long deferred plans for various

LITTLE IMPROVEMENTS

about the farm and its appurtenances, for which SEPTEMBER seems to be the most favorable time in the whole year.

We do not propose at this time to advise particularly what these improvements shall be. They probably differ on nearly every farm. But this year, more especially than any other in the past history of our country, is one in which every citizen will count carefully the cost of all undertakings, while, at the same time, there are many reasons why he should take counsel of his hopes rather than of his fears.

While we would now, as we ever have done caution against inconsiderate and extravagant outlays for agricultural purposes, especially by those of limited means, we believe there is occasion this year to fear that many farmers will be over-cautious, and thus verify in their own experience the truth of the precept, that "there is that which withholdeth more than is meet, and it

tendeth to poverty." Stormy as the political horizon may appear, do not let September pass away without making some permanent improvement on the farm, or at least without doing something to make home more pleasant, and next year's work more agreeable and profitable. Something of this kind may be done at small expense. It will not cost much to plow up a small "land" of that bound out meadow, and seed it down for next year's mowing, harrowing in manure in proportion to the "heft" of the crop you wish to cut thereon for the next six or eight years. Neither will it cost a great deal of money or time to collect materials of some kind to prevent the waste of the best part of the manure in the hog-pen and cowyard, the sink, drain, privy, &c. If the old swamp is dry enough, a few days' work there will furnish an ample supply of an excellent absorbent for the whole year. If it is too wet, what say to a little bit of experience in turning running water over a portion of the grass ground, if you happen to have a stream that can be so used without too much expense; or, while waiting for the dry spell that we usually find in this month or the next, perhaps we can do something for that bushy pasture, or possibly lay up a few rods of stone wall, that will look much better and much safer than the old wooden fence that was so completely smashed down by last winter's snow.

And now for the cattle show. Never mind if it is not managed exactly to suit you. You are just the man that is wanted. Go yourself, and take your family with you, and by the influence of your word and example the "little improvements" which you desire may be effected. Farmers cannot well do without these stated times and occasions for meeting together to examine the results of each other's labor, and to talk over affairs connected with their business. Mechanics who cluster together in villages and cities, have frequent opportunities for conversation, but farmers live remote from each other, and are in danger of becoming too solitary and unsocial. There is high authority for the injunction "to do good and communicate."

For the New England Farmer.

THE WHEAT CROP.

MR. EDITOR:—Have your correspondents done much for the winter wheat crop, which is now in its harvest time? War and taxes should keep all your farmers within their own stone walls for their breadstuffs. Let them all resolve that the last week in August and first week in September *shall not pass with less than two to five acres or more of wheat*, as an indispensable necessity and luxury of the farm. Has the spring wheat suffered much by heavy rains, and the late broken mildewy weather? It is far less *sure* than winter grain. Practice will prove my assertion.

Brooklyn, L. I. H. POOR.

For the New England Farmer.

THE SEASON AND CROPS.

Rarely have I known a season that gave promise of crops more abundant. To be sure, the superabundant rains have materially interfered with the making of hay, which is ever one of the most important products of New England farms; still, a large crop has grown, and most of it has been cured in the best manner practicable, under the circumstances. The introduction of mowing machines and hay caps has greatly facilitated the getting the crop, wherever their value has been known and appreciated. One of my neighbors, who cuts more than one hundred tons of hay, has got it all in, in good condition, by due attention to the time of cutting, and covering when in the field. Hay is not injured by standing in cock for several days, if properly capped; in fact, I am not sure that it is not better made so than in any other way. I cannot doubt that the expense of such caps will be saved in a single season, if properly used. ESSEX.

August 11, 1862.

REMARKS.—Our correspondent is right in his suggestion about hay being worth more for being cured under caps. We have no doubt but it is at least ten per cent. better. Let the grass be thoroughly wilted, or half made, then cock it, cover with caps, and let it remain from 24 to 36 hours; then throw it open to the air and sun for three or four hours, and the hay will be as perfectly cured as it can be. It will not be brittle and break like so many dry twigs, nor bleached until almost colorless, but soft, fragrant, and of a cheerful, light green color, and full of *tallow* and *milk*, or what will abundantly make them. We are for progress in every thing good.

GATHERING SPONGES.

The sponge business is largely pursued at the Bahama Islands. The exports of this article now amount annually to about $200,000. It is almost entirely the growth of the last twenty years. During that period the article has nearly quadrupled in value, and has been applied to a great variety of new purposes, especially in France.

The sponge is compressed in powerful presses and sacked like cotton. It is assorted and graded, samples being fastened to each package to show the quality.

It is fished or raked or grappled up from the clean, sandy bottom at the depth of twenty, forty, and even sixty feet, and often far out from the shore. The water is so transparent that the growing sponge is visible on the bottom.

The sponge, when first taken from the water, is black, and at once becomes offensive to the smell.

The first process is to bury it in the sand, where it remains for two or three weeks, when the gelatinous animal matter seems to be absorbed and destroyed, or eaten by the insects that swarm in the sand.

The boatmen who obtain it are paid in shares by the owners of the boats. This, therefore, becomes a precarious and semi-gambling pursuit, highly attractive to the colored population.

HOW TO ENTER UPON SCIENTIFIC PURSUITS.

The great treasure-house of nature is open to all, and the only fee demanded for inspection, is attention.

Sir J. Herschel said: "In entering upon any scientific pursuit, one of the student's first endeavors ought to be to prepare his mind for the reception of truth, by dismissing, or loosening his hold on all such crude notions as tend to mislead him." The advice is most excellent as far as it goes, and we purpose rendering it more complete, by showing how it can be followed.

Observation of nature is the only source of truth. Discursive observation is the art of noticing circumstances evident to the senses. Men who do this intentionally and carefully, with a view of acquiring a knowledge of phenomena and their causes, are distinguished for their varied knowledge, and often for their great discoveries. Shakspeare must have owed the varied facts interwoven in his delineations of human character to this source. The harnessing of the lightning by Benjamin Franklin, was doubtless the suggestion of his curious observations of things. Fulton, Arkwright, Sir Walter Scott and Cowper are well known to have been careful observers. Newton, Bacon, Hunter, Gall, and others, owe their discoveries to their powers and habits of observation and experiment. Experiment is invented observation. It is putting into operation certain supposed causes in order to observe their effects —or it may be defined as an observation, which we are at some trouble to make. It is the very foundation of scientific pursuits.

Science is reason. Art is rule. Science tells why. Art tells how. An art is a system of rules for the performance of an operation; and science explains the reasons on which the rules of art are founded. To be scientific, therefore, we must have a clear perception of this definition. To have imbibed the spirit of science, whose traits are clear distinctions, accurate classification, and a strict reference to primitive data, is to approach the apex of the inventive pyramid.

The student of science should have all his knowledge systematized and arranged. What other people have in confusion, he should have in order. The elements of knowledge are, more or less, known to all men—but in their perfect, communicable and usable state, they are known only to the scientific man. What training is to the soldier, science is to the thinker. It enables him to control all his resources, and by classification, show his powers to the best advantage. Astronomy, navigation, architecture, geometry, political economy, morals, all rest, or should rest, and do rest, if they have attained to the perfection of science, on primary facts and first principles. Every step should be measured by an axiom—every step traced to a first principle. To detect error, then, in any province of investigation, the student first looks to the primary principles on which it is based, and thus tests the legitimacy of its conclusions.

Observation, definition, classification, are the maxims of absolute necessity to every inventor; without them, no real progress can be made. These principles may not always make their appearance in formal propositions, but still they guide all our thoughts in the same manner as when a musician plays a careless voluntary upon an instrument—he is guided by rules of music he long since became familiar with, though scarcely sensible of them now.

The natural order undoubtedly indicates, first, search for the original principle of things—then definition of terms—then systematizing or classification, and lastly, application. This habit aids not only the acquisition of knowledge, but also its retention. Around these principles, as around a standard, the thoughts naturally associate. Touch but a remote chord of any question, and it will vibrate to the central principle to which it has once been well attached. Every relative impression owns a kindred connection, and the moment one is attacked, it, like a faithful sentinel, arouses a whole troop, which, marshalled and disciplined, bear down and challenge the enemy.

What a poet once sung of the associations of childhood, is true of the associations of scientific investigation:

> "Childhood's loved group revisits every scene,—
> The tangled wood-walk and the tufted green,
> The school's long porch, with reverend mosses gray,
> Just tells the pensive pilgrim where it lay.
> Mute is the bell which rang at peep of dawn,
> Quick'ning my truant steps across the lawn;
> Unheard the shout that rent the noontide air,
> When the slow dial gave a pause to care.
> Up springs at every step, to claim a tear,
> Some little friendship formed and cherished here;
> And not the lightest leaf but trembling teems
> With golden visions and romantic dreams!"

—*Farmer, Mechanic and Cabinet.*

HOT-BEDS---HOT-HOUSES---WEEDS---MANURES.

Will you please answer the following questions through the columns of the *Farmer*, and oblige a constant reader?

1. What size glass and sash are best and most convenient for a hot-bed? What for a small hot-house, in which to start and protect early and tender plants, and how should it be built?

2. How can manure be managed so as to kill the seeds in it, and to escape the trouble of constantly hoeing and pulling weeds, especially among onions and root crops?

3. How are the early onions and peas raised, and what variety are they, that are brought early into Boston market, and sent to other places? Are the onions raised from the seeds? The peas in this market, now brought from Boston, are larger than the very early kinds raised here, such as the Dan. O'Rourke, &c.

Waterville, Me., 1862. B. T. Stevens.

Remarks.—A hot-bed, merely to answer the purposes of a common family, may be constructed of two old house windows and a few pieces of unplaned boards, and the plants will be just as thrifty as under one that cost, $20. But if you wish to engage to a more ample extent in producing early plants, it would be better to construct a hot-bed of considerable size, and of good materials,—and even then, the process of constructing the frame and sash is exceedingly simple. It consists in nailing four boards together, the width being about four feet, or just wide enough to reach across, to tend the plants, and the length extended as far as is desired. The

back board should be as much higher than the front, as will give a proper pitch to the sash for conducting off the water. Pieces of two inch stuff, should be placed in the corners, and the boards nailed to them, to keep the whole stiff. The sash should be narrow, so as to be easily moved, and run up and down, not crosswise, the glass lapping, so as not to leak. This is all that is necessary, with regard to construction; preparing the hot-bed, and managing it, require constant and careful attention.

We can give you but little aid, we fear, about "a small hot-house." All houses for the purpose of starting and growing plants, are rather expensive. A good one—not an extravagant one—will cost from six to ten dollars for each running foot, built of the ordinary dimensions, say 12 by 32 feet, or in about that proportion. A gentleman who is interested in such houses, recently informed us that he can construct a good house for less than five dollars per running foot,—one that will well answer all ordinary purposes.

Your question, in regard to the management of manure so as to kill the seeds, is an important one, as living seeds, spread with manure, not only perpetuate a useless labor, but greatly exhaust the resources of the soil, in the millions of weeds which they produce. We know of only one way to prevent their germinating, and that is through the agency of fermentation. If this process is properly conducted, we think it would not only destroy the vitality of seeds, but vastly increase the value of the manure. But it is a nice process, and few, perhaps, will be willing to give it the necessary time and attention.

The manure should be thrown into large heaps, and a lower place than the heap stands on be made near it, so as to catch all the drainage that escapes, which should be taken up and thrown over the pile two or three times each day. In throwing up the pile, place two or three smooth poles in an upright position, and throw the manure round them so that when the pile is finished these poles will stand in the midst of it. The heap must stand out doors, as the barn cellar would probably be too cool for the fermentative process to go on. After the pile has been set up for two or three days, and repeatedly saturated with its own drainage water, by drawing up one of the stakes and grasping it with the hand, the state of temperature may be ascertained. If it is found to be quite warm in some places, and cooler in others, it will become necessary to overhaul the heap, and break up and thoroughly mingle the whole. In a day or two apply the test again, occasionally drawing out a small portion to learn what its condition is. Great care must be observed not to allow fermentation to proceed too far, as "fire-fang," as it is called, would ensue, and the heap be greatly injured. If fermentation is kept within proper limits—and the heat of the poles and examinations of the manure itself will always determine this—the manure will become nearly black, and quite fine, and we believe the vitality of the seeds will be destroyed. In addition to this the manure is rendered more valuable in every respect by the process; it can be more easily handled and applied to the soil or crops, and it is thought by intelligent farmers that one cord of it will produce more crop the first year than two cords in the crude form in which manure is generally applied.

Will you try this process, and inform us how you succeed?

The onions which you inquire about are probably produced from what is called the "top," or "potato" onion. This produces a cluster of bulbs, or offsets, in number from two to twelve, and even more, uniformly *beneath* the soil. Or, the onions that come along so early may be obtained in the following manner: Sow the seed of common onions so late as to get little bulbs of the size of a cranberry by the last of August, then take them up carefully, and dry them, and pack away secure from frost. Quite early in the spring, as soon as the soil will permit it, plant these little bulbs in favorable situations, and they will soon produce fair sized onions.

The size of the peas of which you speak may be owing to the high culture which they receive. There are, however, several varieties which vary considerably in earliness and in size, such as the Dan. O'Rourke, Champion of England, Missouri Marrowfat, &c. &c.

TUBULAR BRICKS.

The society for improving the condition of the laboring classes in London, highly commend the use of tubular bricks for purposes of construction. According to an official statement made by the society, a size has been chosen which, with the omission of the headers, reduces, by about one-third, the number of joints, and greatly improves the appearance of the work, giving it more boldness of effect and resemblance to stone than that of ordinary brickwork. This size is twelve inches long, and three courses rise one foot in height—a size equally convenient for the workmen in the manufacture and in the use of the bricks. Nine bricks of this kind and size will do as much walling as sixteen of the common sort, while the weight of the former but little exceeds that of the latter. When passing through the machine, or in the process of drying, any number may be readily splayed at the ends for gables, or marked for closures, and broken off as required in use, or they may be perforated for the purpose of ventilation.

IN one ton of cabbage there are 189 ounces of sand, 184 of salt (chloride of sodium,) 279 of sulphuric acid, 156 of phosphoric acid, 72 of magnesia, 652 of lime, 208 of soda, 661 of potash.

MANURES.

All decomposing animal matters form most energetic fertilizers, and the collection of carcases of animals, the blood from slaughter-houses, the residue from the manufacture of preserved meat, fish, &c., are all substances which, if given to the soil, would be the source of abundant crops. But these substances are difficult to preserve. The abominable stench they give out prevents their transport to any distance by land or sea. It is also extremely difficult to remove the excess of water they contain, which insensibly augments their weight, and at the same time contributes to their more rapid decomposition.

To render blood, flesh, &c., imputrescent while desiscating and during the time necessary to keep them, but nevertheless to preserve their fertilizing properties, so that when added to the soil they may give out the putrefying elements required for the nourishment of plants, is a subject of great importance. To the solution of this problem, M. Chevallier, son of the distinguished chemist who has done so much for the advancement of industrial science and pharmacy, has lately directed his attention. M. Chevallier has found that a small quantity of acid suffices, (from two to four per cent. of the chloridine acid of commerce,) for partially drying blood or flesh without giving out sensible odor. It is highly desirable that this suggestion should be practically tested, and, if verified, generally adopted. The London-Manure Company, for instance, some time since endeavored to bring into notice an animal manure, consisting of the waste flesh of cattle imported from the River Plate, which contained 11 per cent. of nitrogen. The detestable stench of this substance, however, fully accounts for the repugnance of captains and owners in bringing it over. The adoption of some such process as that of M. Chevallier might, however, remove this objection, and bring into use this manure, which would prove nearly as valuable as the blood manure of the same company, containing about 16 per cent. of nitrogen. The quantity of animal matter at present wasted in the countries of the New World is enormous. In South America there are killed annually, for their hides alone, more than 5,000,000 head of cattle, the carcases being left to rot. There is thus wasted not less than 500,000 tons of manure, equally rich with the best guano. On the banks and shores of Newfoundland, again, there is thrown into the sea more than 10,000 tons of waste fish and bones, besides quantities of seal blubber. On the coast of France, especially of Britanny, there exist considerable quantites of waste fish, available for manure, but which is not cared for, although equal in fertilizing properties to guano. We may estimate that it is possible to furnish to agriculture an annual quantity equal to 400,000 tons of valuable animal manure, at present lost.—*Mark-Lane Express.*

Do Your Own Work.—Enlarge not thy destiny, says the oracle; endeavor not to do more than is given thee in charge; the one prudence of life is concentration; the one evil is dissipation; and it makes no difference whether our dissipations are coarse or fine. Property and its cares, friends and a social habit, or politics, or music, or feasting—everything is good which takes away one plaything and delusion more, and drives us home to add one stroke of faithful work. Friends, books, pictures, *lower duties*, talents, flatteries, hopes—all are distractions which cause oscillations in our giddy balloon, and make a good poise and a straight course impossible. You must elect your work; you shall take what your brain can, and drop the rest. Only so can that amount of vital force accumulate which can make the step from knowing to doing.—*Emerson.*

For the New England Farmer.

THE ADVANTAGES OF A CULTIVATED MIND.

In a former article I mentioned some of the instrumentalities by which the laboring man can become the possessor of a cultivated and intelligent mind, and a refined imagination. I now propose to show some of the advantages and benefits which are derived from a course of mental discipline, and the patient acquisition of useful and agreeable knowledge.

The question is frequently asked by honest, but ignorant people, "*What good does all this reading, study, thinking, and writing do? Show us the use of spending so much time in doing nothing, and we shall have more faith in what you say.*" I shall commence my answer to the above question by asking another. What is that, which everybody is ever either actively in pursuit of, or passively sighing for? All who understand anything of the human heart will readily answer—*happiness.*

Although the different paths in which it is sought after, are almost as numerous as the grains of sand upon the seashore, and, although some succeed in finding it, and others do not, yet every man, woman and child is always longing and striving for happiness, in some of its many forms. This yearning for happiness is implanted by Nature in every breast; and our infinitely wise and benevolent Creator has placed the means within our reach, by which we can gratify, not only our own personal desires for enjoyment, but also assist in making others happy.

As we are all seeking for happiness, is he not the wisest man who pursues the course of action which will secure to him that enjoyment which is of the purest, most satisfying, and most enduring kind? That he is, all will admit. Now it has been proved, beyond the least shadow of a doubt, by observations extending through a period of several thousand years, that the pleasures of the mind are far superior to those of the body; in other words, the happiness which springs from the exercise and cultivation of our mental faculties, is as much greater and more lasting, than mere physical or animal enjoyment, as man is superior to the brutes, or as the soul surpasses the body in importance and duration. Here, then, is one of the greatest reasons why we should endeavor, by every means within our power, to strengthen and enlarge our mental powers; for by so doing, we can increase our capacities for happiness and usefulness to an unlimited extent.

This exercise and training of the mind, is an irksome and difficult task to a vast number of persons; but this fact is no argument against such a practice. Physical exercise and labor is also dis-

agreeable to many individuals, but who does not enjoy the blessings of his own labor, or that of others? But the exercise and improvement of the mind is not always irksome and unpleasant. What seems, at first, a hard and wearisome task, if persevered in, finally becomes a positive and fascinating pleasure, beside which all physical enjoyment is dull, insipid, and unsatisfying.

Mental culture brings along with it so many advantages, blessings and enjoyments that they cannot be numbered; and in attempting to describe them faithfully, I should be at a loss to know where to begin or end. My limits will not permit me to mention, only in general terms, the advantages which individuals and nations, of cultivated intellects, possess over the ignorant and illiterate.

In the common affairs of life, we all know and have felt the importance of knowing how to do a thing; indeed, without the requisite knowledge, we can do nothing in a proper manner, but are extremely liable, and almost always do fail in every undertaking. "Knowledge is power;" and he, who possesses the greatest amount and variety of it, and knows how to apply it to practical and useful purposes, has an advantage over the ignorant, similar in kind, if not in degree, to that which man holds over the brute creation. A thorough knowledge even of the most familiar natural objects, or of the most common pursuits of life, cannot in every, if in any, instance, be acquired simply by our own observations, or by the verbal communications of others. In the acquisition of any particular kind of knowledge, we must not only observe, study, and think ourselves, but make use of the thoughts, observations, and discoveries of other minds upon the same point; and this, in most cases, can be done only through the medium of books.

I will now turn from individuals to nations, and behold the effects of knowledge and mental improvement. It is a well-known fact, that throughout the northern portion of the United States, education is much more generally diffused among the common people than it is in any other land. Here, those who cannot read and write are an exception to the general rule; but among the working classes of every other nation under the sun, he who has taken this first step in the rudiments of knowledge is an exception, and not the rule; and is regarded by his neighbors as a fortunate man.

And what is the effect upon our nation, of this acquirement, and of the power which it gives to enter the unlimited realms of knowledge? The question is easily answered. It has made us, as a people, capable of creating, and, I believe, of sustaining a form of government greatly superior, in every respect, to all others that exist, or that ever existed upon the face of the globe! A republican form of government like our own, cannot exist where ignorance prevails among the people. Such a government is founded upon the knowledge, virtue and Christianity of the people who sustain it.

Ignorance is as much opposed to true republicanism, as slavery is opposed to freedom, or darkness is to light. That there are imperfections in our present form of government, we must admit; but when slavery, that vampire upon our national prosperity and happiness, is uprooted and utterly annihilated, it will be as perfect as we can reasonably hope to make it, in the present age of the world.

The most important effects of knowledge, or mental illumination, are to be seen in its moral bearings, and the ability which it gives an individual to worship the Most High in a more intelligent, and, consequently, in a more acceptable manner. Every kind of knowledge confers advantages and blessings upon a cultivated, or well-regulated mind; but a knowledge of the natural sciences, or of the visible manifestations of God's power, wisdom and goodness, as displayed in the works of creation, is a special and powerful incentive to religious thought and feeling. But I must close, and yet the field which this subject opens before us has scarcely been entered. Who will lead us over its boundless expanse?

S. L. WHITE.

COMPARATIVE NOURISHMENT IN VEGETABLES.

So far as regards the nutrimental properties of different root crops, when fed as food to animals, there has been, as doubtless there always will be, considerable difference of opinion among practical men. The following table by the distinguished chemist, Boussingault, shows the relative value of the several articles named, so far as their nutrimental properties are involved. One hundred parts of the White French Bean, at a standard of 100, are equal to the following:—

Yellow Peas	120
Farina of Cabbage	140
" " Carrots	170
" " Wheat	175
Wheat	191
French Wheat	193
Rye	200
Farina of Barley	210
" " Potatoes	225
Barley	232
Indian Corn	246
Potatoes	1096
Carrots	1351
White Cabbage	1446
Turnips	2383

The author observes that, on a comparison of his experiments with the practical experience of farmers in feeding cattle, he found a most remarkable coincidence between the theoretical and practical inference. We present the table as we find it, leaving the reader to deduce his own conclusions.

FLIES ON PICTURE FRAMES.—There is no better preventive of flies soiling gilt frames than by covering them with gauze. It must be admitted, however, that many persons prefer leaving the frames exposed rather than hide them under the usual gauze covering; I would therefore suggest to manufacturers the advantage of improving the material. As at present made, the fabric is woven much closer than is necessary. The finest and most open work gossamer that could be woven, would prove effectual in preventing flies settling near any object that was covered with it. A fly's instinct prevents it going near a cobweb. I would say, then, weave your gauze as fine and as much to resemble a spider's web as possible. This would prevent the evil the housewife dreads, and at the same time would not hide any of the gilt and carved frames.—*S. Piesse.*

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

A WALK THROUGH MY GARDEN.—The location is near the southerly edge of a bluff, which rises rather abruptly about eighty feet from the river—the ground is nearly level, and the garden faces about south-east, with no protection from the northerly winds which sweep down the valley, except a six foot close board fence. The soil is a light sandy and gravelly loam, with a substratum of sand on the north part, and of loose gravel on the south part. Both the soil and the subsoil are so porous that the opinion was freely expressed by my friends, when my trees and vines were planted, that they would "never amount to much." Two years ago last October there was not a tree or shrub on the place, except one poverty-stricken seedling peach tree, which latter was promptly dug up and converted into fire wood. Now let us take a walk around this lot of 120 feet square and see what we can find worth noting.

GRAPERY.—This is a very cheaply built leanto, of 9 by 18 feet dimensions. Only the roof is glazed, and that is made entirely of common second-hand window sash. The cost of the whole, including the border, was not over twenty-five dollars. The border is about six feet wide, and two feet deep, and contains, besides the soil taken from the spot, about one-fourth cord of old barn-yard manure, and ten bushels of oyster shells. Six vines (layers of the previous year) were planted in this house two years ago last April, (1860.) The first year they made a moderate growth, of well-ripened and short-jointed canes. Our friends didn't expect much from such a miserly made house and border, and their expectations seemed to be fully realized. The second year the vines were allowed to bear an average of four bunches of fruit each. The grapes ripened well, and the vines made all the new growth that they were allowed. It was evident that the border, with the occasional liquid manurings, was amply nourishing for the time being. Last fall the vines were cut back to about six feet of cane each, and the border moderattely top-dressed with barn-yard manure and muck compost. This spring, long after my grape friends had uncovered their own vines, the vines were set to work again, and now (July 22) the six vines show an average of twelve bunches each of good looking fruit, and appear to be in excellent condition. The only ventilation possible, is by the door at one end, and a common sash window in the back side, opening into the wood shed. Being absent myself from morning until nearly evening, the care of opening and closing the house has been attended to by my "help-meet," and has consisted of little else than daily opening the door and window in the morning, and closing them at four or five o'clock in the afternoon. Occasionally the inside border is given a good soaking with clean water, or sink drainage, and the vines syringed.

From my experience thus far, joined with a somewhat extensive reading and observation, the conclusion is forced upon me, that the raising of excellent grapes under glass is a very simple thing, and need not be an expensive one. Of the many graperies I have visited, there is not one of them all but what were built at an unnecessarily large expense. Having nearly completed arrangements for the erection of a new one this fall, I hope soon to be able to prove to the readers of the *Farmer* that a very little money will furnish them with a neat and complete house for growing the finest grapes.

As our friend Brown likes short articles—that's where he is just right—we must defer our notes on the out-door grapes, &c., until another time.

For the New England Farmer.

CLOVER CROPS.

MR. BROWN:—In your edition of July 12th, of weekly *Farmer*, I noticed a short piece on the cultivation of clover as fodder. The article embraced four questions which I think are of great importance to all farmers. First, as to the best kind for New England farms. What the practice is on the continent I know not, but here the farmers all follow one routine, as to seeding down, and as regards kind and quality sown. Yet, from my own observation, I should judge that the red clover did as well here as any other. There is one man on the isle who has about two and a half acres of white clover that has come in naturally; this is the first season it has been cut for fodder, so that its merits cannot be descanted on at present.

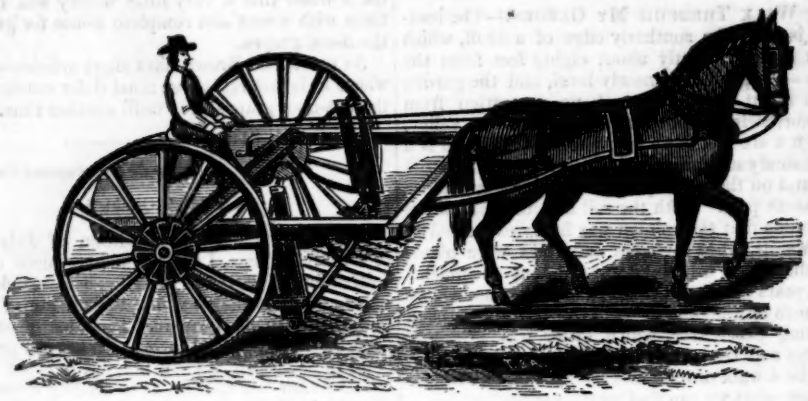
The second query, "What is the best method of producing it?" is the one I would like for you or some of your correspondents to answer particularly, and at the same time I would like to propound a question for some of them to enlighten me upon; to wit,—Would a person not get as much hay from two acres of good land, to seed down in the fall to clover, and mow first and second crops the following year, and instead of fall feeding the land turn under that feed for manure, and again seed to clover, and at the same time improve his land a little each year? If he could do so, what is the best month to so do in?

We are all now in the midst of haying, and have the promise of more than an average crop of hay. Our own and other vegetation is backward, and fears are entertained of the wheat being a total failure, on account of a little fly that has taken it. Is there any remedy for it?

Nantucket, July 1, 1862. TOBWOASHA.

REMARKS.—We are glad that our queries in regard to the cultivation of clover crops are attracting attention. We prefer that others should answer these, and the one propounded by our correspondent, above. In the meantime, we shall improve every opportunity to converse with farmers, and endeavor to get their opinions on the questions submitted.

EXPENSIVE CEREMONY.—The expenses of the canonization of the forty Japanese martyrs at Rome amounted to nearly $2,000,000, 70,000 of which were furnished by the Franciscans, and 30,000 by the Jesuits and Carmelites. The tapers used at the church were 35,000 in number, of the purest white wax, each weighing three pounds, and alone cost $25,000.



REVOLVING WHEEL RAKE

We insert the above cut of *"Cogswell's Revolving Wheel Rake,"* for two reasons:

1. To place before the reader who wishes to procure a horse rake, some idea of the construction of this one, better than he can gain by a mere explanation in words,—and

2. To promote the interest of an inventor who is willing to "warrant" that his machine shall *"do the work easier and better than any other rake in the market."*

We have never seen this rake, and, of course, can say nothing of its merits; but we should be glad to test it in a quiet way in our own fields.

The proprietors say:

The rake can be mounted on common carriage-wheels, and has a spring seat for the driver. It has wooden teeth, which cannot injure the roots of the grass, and can be easily replaced if broken.

It comes directly before the driver, which is a decided improvement over any other, obviating the necessity of looking backwards.

It works with a lever, which is so constructed that the driver with one hand can raise the rake full of hay over any obstruction to the height of two feet.

It is warranted to rake hay and grain, and is well adapted to the roughest fields, and will not scrape up any dirt or stubble. It leaves the hay in good order to put up, and can be operated by a lad sixteen years of age.

Feeding Oats to Horses.—The same quantity of oats given to a horse produces different effects according to the time they are administered. I have made the experiments on my own horses, and have always observed that there is in the dung a quantity of oats not digested, when I purposely gave them water after a feed of oats. There is, then, decidedly a great advantage in giving horses water before corn. There is another bad habit, that of giving corn and hay on their return to the stable after hard work. Being very hungry, they devour it eagerly and do not masticate; the consequence is, it is not so well digested and not nearly so nutritious. When a horse returns from work, perspiring and out of breath, he should be allowed to rest for a time, then given a little hay, half an hour afterward water, and then oats. By this plan water may be given without risk of cold, as the oats act as a stimulant.

A PENMAN ON PENS.

What a pen is to be made of is still unsettled. The quill, the steel pen and the hard-nibbed gold pen, have their several advocates, and are largely used; but still every one complains that he is not suited; nothing that is good and cheap lasts. Various contrivances have been adopted for keeping steel and corrosion apart. Pens have been galvanized on Davy's plan for protecting the ship's copper, but not with good effect. Washes of all kinds have been applied; the latest we have seen being of gutta-percha, with the very improper name of the *gutta-percha pen*. Glass has been tried, but has not come into use. A correspondent inform us, that he strongly suspects that simple gold, without any hard nib, is the true material. When his nibs have come off, whether by wear or accident, he grinds the gold ends in an unskilful way into something like a practical form. He thus produces a rough pen, which is so durable that he thinks the manufacturers would do well to turn their attention to the imitation of a quill in gold. The metal is to be excessively thin, and our correspondent suspects that the best imitation of a quill would require so little gold that a pen might be sold for a shilling. This pen, he thinks, would last for six months, at least, even in the hands of a reviewer. At any rate, it is worth while to repeat, from time to time, the complaint that the world, in this prodigiously puffed and loudly lauded nineteenth century, is still without a pen.—*London Athenæum.*

For the New England Farmer.

SEASON AND CROPS IN ILLINOIS.

MR. EDITOR:—When I was spending my earlier boyhood days upon a farm in New Hampshire, I can well recollect with what pleasure I used to read the *Farmer*, and watch with interest for the notes of correspondents from the different sections of the country, and, perhaps, a few notes from the Sucker State may be of interest to some now.

This is a small rail station on the Chicago, Burlington and Quincy railroad. It contains some seventy-five dwelling-houses, three stores, one grocery, and it used to have a beer saloon—but thanks to the Sons of Temperance, it is now among the things that were,—a tin shop, three blacksmiths' shops, a wagon shop, shoe shop and two harness shops. The religious sentiments are represented by three churches, and when the village first sprung into existence, the old log schoolhouse beside the grove not being considered commodious enough, a new one was built. That one, however, becoming wholly insufficient for educational purposes, another was completed last year, sufficiently commodious for four teachers. Two doctors and a lawyer represent the medical and legal profession.

Seven years ago the place was almost an unbroken prairie. The first settlements were made in the township about twenty-five years ago, but settlers did not come in till about the time of the opening of the railroad, six years ago. The people are mostly from the New England States and New York, though there are some Pennsylvanians; consequently it has a decided New England aspect. The prairie is all enclosed except an occasionally barren section, and also the timber land, consequently most of the farmers are obliged now to keep their cattle from running at large, if they would have them do well. There are only two or three small flocks of sheep in this vicinity.

Crops of all kinds are looking well. Wheat will begin to be fit for the reaper next week, and there will be a good crop, if harvested well. Corn is late, but doing well now, under the fine showers and warm weather. The former is selling for sixty cents per bushel and the latter for eighteen. Grain would be much higher if the freights to the Eastern markets were not so high. Haying is generally done after harvesting, though where tame grass is cultivated, it requires earlier attention.

Owing to so much wet weather, the musquitoes are very troublesome, much more so than for several years past.

Money is more plenty than a year ago; then the banks in the State were all breaking down.

S. H. JACKMAN.

Buda, Bureau Co., Ill., 1862.

A SUBTERRANEAN RAILWAY IN LONDON.—A subterranean railway is now in an advanced state of construction, running about four and a half miles under the city of London. It commences at Victoria Street, in the midst of what was formerly a disreputable thoroughfare, but is now a common centre for the Great Northern, the London, Chatham and Dover, and the Metropolitan lines. From that point it passes eastwardly, having a large number of intermediate stations. On the occasion of a recent trip made through a portion of its length, the air was found to be perfectly sweet, and free from all unpleasantness or dampness. The locomotives used condense their own smoke, so that neither gas nor vapor is perceptible. The surface of the rails is made of steel. The line is made for two guages, and it is a double track throughout. The carriages will be roomy, well ventilated, and lighted with portable gas. It is expected that the road will be opened, about the middle of June.—*Scientific American.*

For the New England Farmer.

IRRIGATION.

BY JUDGE FRENCH.

Passing recently over a road which we have known for many years, endeavoring to "find books in the running brooks, sermons in stones, and good in everything," the effect of a little brook of clear water, which was made to trickle through the grass on a hillside, reminded us of the subject of irrigation. Here was a stream, which, in summer, would scarcely fill a single furrow of a sod plow, arrested in its rapid descent, and carried round a hill, at nearly a level, for some sixty rods, breaking over the little trench in which it ran, and evidently causing an increase, three or four-fold, in the crop of grass thus watered by it. Any farmer may observe the same result wherever he travels. It is true that, in most instances, the water which thus comes under our observation runs from the roadside, and we are apt to refer the fertilizing effect uniformly observed, to what we call "the wash of the road," and to give much of the credit rather to the roadside manure than to the water. The little brook to which allusion has been made, flowed directly across the highway, between two little hills, so that it gained nothing from the road; and careful observation will satisfy any one, that even the purest water, flowing over the surface of a grass-field, will ensure a good crop of hay on almost any soil. Stagnant water, on the other hand, either in the soil, or upon it, is sure death to all cultivated crops.

We will not undertake to theorize upon a subject upon which the profoundest thinkers confess themselves at fault. Theories are very good to account for facts, but facts are far safer upon which to base our practice.

Prof. Way says,—"Although the benefit to be derived from the use of water in irrigation is incontestible, the mode in which it acts has not been satisfactorily explained. That streams of water bringing down with them in suspension the fine soil of more elevated land, on receiving in their course the rich drainage of populous districts, should prove fertilizing in the highest degree, we can easily understand. But there is more difficulty in accounting satisfactorily for the

striking results which are obtained from spring water flowing clear and limpid from the very bowels of the earth."

In an excellent article on water meadows, in the *Cyclopædia of Agriculture*, the author says,—"Another question then arises,—Is clean or turbid water best? One might suppose that the latter, as abounding more in organic and inorganic manuring substances, but experience seems to declare that for grass land, the clearer the water the better." As a first proposition, we merely wish to maintain that irrigation with pure water, such as brooks or wells afford, is beneficial to grass, and to some other crops.

DO WE NEED IRRIGATION IN NEW ENGLAND?

Our climate, although cold in winter, is tropical in summer. England, where the plow may run, in many counties, every month in the year, is too cold and damp in summer for Indian corn to ripen. Irrigation is most profitable, and therefore most practical, in hot climates. We suppose it can hardly be profitable in New England, except for grass. Heat and the moisture of water not stagnant, will ensure heavy crops of grass, on any tolerable soil. Usually, two or three heavy rains in May and June, or the want of them, decide for us the question of a good crop of grass. Stagnant water may produce a crop of swamp grass, but never of good hay. Drainage, natural or artificial, and abundant moisture, though seemingly contradictory, are essential conditions of a good grass crop. We must get rid of surplus stagnating water, and supply percolating water with the air that always follows it downward, and then we may cut not only one, but three or four good crops of hay, as is done in other countries.

The Craigintinny meadows, watered by the sewage fluid of the city of Edinburgh, produce annually from 70 to 80 tons of green grass per acre, which sells on the land for from $125 to $175. The quantity applied, is said to be 10,000 tons per acre in all, at eighteen different times. The value of this liquid, has been heretofore stated to be about four cents per ton, reckoning what elements of fertility it contains, compared with other manure, but Prof. Voelcker has recently stated that this is an over-estimate. But even this small value of four cents per ton, makes $400 per acre, which is more than twice the value of the enormous crop. The application of the sewage of cities to land will not pay, as a mere agricultural experiment, but connected with the necessity of getting the filth of the large towns where it can do no harm, and may do much good, the plan is worthy of attention. The question whether the people of London shall drain their sewers into the Thames, and corrupt the air so that Parliament cannot continue its sessions, or conduct it off upon the soil for cultivation, involves other considerations than such as are purely agricultural.

But the point we desired to make, is this, that the water alone is entitled to much of the credit of these liquid manurings. Prof. Voelcker says that on well drained clay soil, irrigation with the purest water, even distilled water, if it were possible, which would contain no foreign substance, will produce very large crops of grass, and that in many cases of liquid manuring which have attracted attention, water is the most valuable constituent.

Now we do not mean to say that poor land will produce large crops with no manure but water, but we do believe that almost any dry field which produces one ton of hay may be made to produce two tons at the first cutting, and at least as much more at two subsequent cuttings, by irrigation with water only.

WHERE SHALL WE GET WATER?

In reading recently of agriculture in Algeria, now a French colony in the north of Africa, on the Mediterranean, we observed an account of one Jemmy Brown, a Jersey farmer, whom Mr. Caird had found comfortably located there on 60 acres of land, where he was cultivating wheat and market vegetables. It was watered regularly *from a well* worked by one horse, by means of which he irrigated seven acres a day. He watered his lucerne every six days, and cut it ten times a year. His vineyard needed no irrigation. We chance, also, to have before us "The Transactions of the San Joaquin Valley Agricultural Society for 1861," and find that the Californians, like the modern Algerines, have already learned the value of irrigation. The committees on orchards, vineyards and nurseries, travelled extensively through the valley, taking notes as they went. They give no connected statement on the subject of irrigation, but incidentally speak of it in many places. Some of the orchards are spoken of as "partly irrigated and partly not." One "ranch" is named, and the remark is made that the trees and vines are six years old, "irrigated with a horse-power pump from a well eighteen feet deep." Andrew Wolf's farm of 800 acres is named—500 in cultivation. The wheat yielded 37½ bushels to the acre, *volunteer* 20 bushels to the acre, raised 3,768 bushels of wheat and 2,800 of barley, cut 60 tons of hay, and grazes 120 head of cattle, &c. "The orchard and garden are irrigated by one of the improved horse-power force pumps, manufactured by Keep & Briggs, of Stockton; the well (Artesian) is 58 feet deep, throwing a continuous, full, strong, six-inch stream, affording ample water in a few hours' run each day, for irrigating the ground and supplying the stock."

On John Rich's farm, on the Sonora road, it

seems another power is used. "We counted eight *windmills* on the place for irrigating. They were of every variety, from Derrick's best, to the worst form of the 'spinning' sort." By a "volunteer" crop, we understand a second crop, which grows without sowing from the scattered seed of the former crop.

The "improvement" which we would make from these hints is this, that if it is found that it would pay in New England, we might almost anywhere sink a well which would supply all the water for irrigation. We have long had the impression that such an experiment might be very successful, where the hay crop is the chief object. Much of our land which we are obliged to plow after two or three crops of hay, might be kept permanently in mowing, by two or three waterings in May and June, and as many after the first cutting as the character of the season might demand. To do this, the field must, of course, be carefully prepared with water-furrows carried along the slopes so as to conduct the water evenly over the whole surface, and the water must be applied at the highest point. These furrows need not be deep enough to impede the mowing machine or horse rake, and the labor of superintending the irrigation would be very slight. Who will give us an experiment in irrigation from a well on this side of the Rocky Mountains? And will not our friends on the other side give us details of their successful operations in this department?

For the New England Farmer.

CLOVER IN ORCHARDS.

Mr. Editor:—In the *Farmer* of July 12 you call for experience and opinion in relation to the management of orchards. I have a young orchard which I have always kept plowed and cultivated until this season, but find many difficulties connected with it. In addition to the extra labor and danger of breaking root and limbs and barking the trees, the fruit gets sandy, and requires a great deal of cleaning, and continued cropping with hoed crops seems to injure the growth of the trees, even if manure is applied pretty liberally. Last spring I concluded to keep the surface mellow by a liberal use of the cultivator and harrow, but the land not being quite level and a heavy shower following soon after my first experiment in this direction, there was not sufficient depth of porous earth to absorb the rain, and much of the fine rich surface soil left for "parts unknown."

With this unfavorable experience in cultivation, I intend to try seeding to grass or clover, and apply a liberal dressing of manure in September and October, which, I think, will soak into the ground and give the trees an opportunity to appropriate a fair proportion of it before the grass has time to absorb it all. I expect, also, to gain another advantage by leaving a sufficient growth on the land to retain the leaves in the fall, which I think equal to a pretty good dressing of manure. Some care will, however, be necessary to protect the trees from mice, unless, as in my orchard, several good cats take good care of them.

Clover is supposed to derive much of its material for growth from the atmosphere, and on this account would be better for an orchard than grass. The only objection to clover, that occurs to me now, is its liability to winter-kill, and this might be obviated by sowing seed occasionally.

Ashfield, July 15, 1862. Wm. F. Bassett.

Remarks.—Thank you, sir. We hope to get the opinion of many good farmers on this subject. It is quite probable that there is a less expensive way of managing orchards than the course now generally adopted.

For the New England Farmer.

FARMERS AND NATURAL HISTORY.

Mr. Editor:—Your correspondent of July 19th found "many *uncandid* sneers at students of natural history who endeavor to benefit others," &c., in my communication of July 5th. I have carefully looked over that article to see on what such charges was predicated, and found nothing, in my judgment, to justify it; and as your correspondent quoted nothing to illustrate his statement, it is regarded as entirely gratuitous. It is true, I referred to the charges of ignorance, made against farmers, by students, professors and divines, and attempted to justify the tillers of the soil from the attacks of such assailants, not designing to make, neither am I aware of making, any "*uncandid* sneers," nor "*candid* sneers." [Would the latter be justifiable?]

But, says your correspondent, "If the farmer *will* not, or *cannot* study the works of nature, he must be at the mercy of every ignorant pretender." Nay, Mr. Editor, he gives such empirics no quarters. As little as he knows, he soon learns that they really know much less than he does. The farmer has learned the habits and uses of many quadrupeds, birds, reptiles, insects and plants, though quite unable to name them systematically. The learned pundit begins at once, if botany be the topic, to utter "long-jawed" names, such as ampelosicyos, chamænespilus, helminthostachys, pogoyne, sciniverechia, splenchnomyces, zetragonotheca, hysmalobium and zuccagnia; and because the farmers laugh over such a lingo, they are charged with ignorance. Let the farmers turn upon these botanical pundits, and ask them the meaning of these unmeaning sounds to them, and what is the answer? Let those who have tried it testify. The same is true of the various departments of the animal kingdom.

I remember once of asking a learned botanical professor some questions concerning the qualities and uses of certain plants with whose systematic names he seemed to be quite familiar. His curt reply was, "Such inquiries concern not the scientist." Very well, said I to myself; there are men who know nothing of the systematic names of plants, who are, nevertheless, familiar with their habits, uses and economical value. Thinks I to myself, the knowledge of the latter is greatly preferable to that of the former, for one who is to earn his food and raiment in a world where both must be had.

Admitting that your correspondent found a farmer who believed that a "rose bug" becomes a "dung fly," let this be an offset to a student of natural history, who taught that a lobster is an insect. Such cases may be few.

No farmer need open a book, or be told by students in natural history, that caterpillars can be destroyed, if taken in season. But when he interrogated these pundits about the army worm, the palmer worm, the grain aphis, &c., what did he learn of a practical nature? Just nothing at all, as was again and again demonstrated last year, with regard to some of these depredators.

Your correspondent has yet to learn that woodpeckers *do* injure *fruit* and *forest* trees; also that they are not hunting borers so far from the ground. Does he need be told that crows *do* destroy the eggs of other birds? What birds bring up their broods on caterpillars, at the rate of "from 50 to 100 a day? What kind of caterpillars are referred to? When your correspondent answers these inquiries, I have others in store for him, as he voluntarily offers, gratuitously, to teach a

FARMER.

RIPENING PEARS.

At a meeting of the Farmers' Club (September 9th) the subject of "Ripening Pears" was discussed, and while all agreed that the later sorts should be removed from the trees when hard, to be ripened in fruit rooms at their proper seasons, some preferred the summer and fall pears when ripened on the trees. Several admitted that the Seckel would ripen perfectly on the tree; but J. W. Hayes, Esq., of Newark, claimed that many, if not all the summer and fall pears, were better when so ripened, while Dr. Carpenter, and many others, stated, that with the exception of the Seckel, none of the summer or fall pears were so good when not gathered in a green state; that they became mealy, losing much of their juice by evaporation, etc.; while, if removed from the tree before losing their hardness, and ripened in proper localities, the pears were more delicious, and every way preferable. Our experience coincides with the latter opinion, for we have found that even the Bartlett is materially improved in quality by being ripened in the dark after being removed from the tree.

We are anxious for exact information on this subject, and would thank our pomological readers if they would furnish it, and also the proper dates for ripening each of the latter kinds of pears. If the Duchess D'Angouleme be placed in a warm room, and ripened at various dates, fifteen days apart, from Sept. 15th to Dec. 1st, those ripened at the latest date will be found to be far better in quality than those ripened earlier. A perfect list of the later pears, with the best dates for ripening them, would be very valuable, and would assist fruit dealers in improving the public appreciation of the finer qualities of fruits.—*Working Farmer.*

BLIGHT IN PEAR TREES.—We are sorry to learn that the "pear-blight" is making its appearance quite extensively. Some of the finest trees in our knowledge are ruined, and others badly affected. What the cause is, or what the remedy, we do not know. There are theories as to the cause, but they fail to satisfy us. Downing says that upon the first appearance of dying leaves, they must be taken off. That is well enough, as they disfigure the tree, and we are anxious to be doing something—but it does not always arrest the disease. Will some one tell us more about it?

For the New England Farmer.

FARMERS' WIVES.

The farmer's wife is, or at least should be, the most cheerful, happy being in existence. Surrounded as she is by everything beautiful in nature, wakened every morning by the joyful caroling of the birds in the trees around the house, soothed all day by the whispering winds and balmy breezes, laden with sweet perfumes stolen from clover-field or apple blossoms, how can she be otherwise than happy? O, how from my heart have I pitied poor, pale, uneasy-minded women, living in large villages or cities, where every inch of ground was precious, and not a bird sang, but with a sort of wheezy, choked music, and the very trees looked dusty and dim!

How often in the morning, as throwing open my doors and windows to the cool morning air that came bustling in, filling every breath with pure, sweet odors from the budding trees and springing grass, have I wished my city friends could stand in the door by my side, and gaze upon the lovely scene spread out to my admiring view.

With everything so beautiful around her, woman can work hard, harder, perhaps, than she ought, but with willing hands. Everybody and everything works in the country. You cannot look even for a moment, out at the open door, without seeing some little bird very busy getting straws to build her nest, worms to feed her little fledgelings, or working industriously to teach them the use of their tiny wings, that scarce can bear their weight, or perhaps you see some merry, chirruping squirrel, adroitly stealing his stock of grain, for the winter he knows must come, sooner or later, and hiding it wisely in the decayed trunk of a neighboring apple tree.

The spirit of action is contagious. The hours glide by and so does the work, and when dinner-time arrives, instead of the pale, languid countenance you find in the city wife, as she sits down to her luxurious table, loaded with over-cooked meat, under-cooked vegetables, stale fruits and baker's bread, a brisk, cheerful face meets you at table, whereon you find ham and eggs, and Indian meal pudding and molasses, perhaps, but good, light, sweet, wheat bread, and tempting dishes of fruit, fresh from the garden, that would completely upset the equanimity of the guests at the aforesaid city table.

A farmer's wife can concoct such dishes as city folks know nothing of. With plenty of milk and eggs, there is always something in the house to eat. You can never take her so much by surprise that she will give you no invitation to stop to tea, and she is never so full of apologies because that tea is not nice enough, as to render you uncomfortable.

With a mind evenly balanced, a home made happy by her presence, a contented disposition,

wishing no change, a quiet, easy way of turning off work, the farmer's wife is a woman to be envied, and still some poor, foolish mortals presume to pity her! Pity, indeed; better bestow it where it is needed! The highest, noblest lot of woman is her home mission, and the most superior place for the exercise of her power is in the quiet home in the country, 'mid the soul-stirring beauties of nature, the handiwork of nature's God.

SARAH.

NAILS, NUTS, SCREWS AND BOLTS.

One of the component parts of a good farmer is mechanical ingenuity. Some lose half a day's valuable time, for want of knowing how to repair a breakage, which an ingenious person could do in five minutes. A team and two or three men are sometimes stopped a whole day, at a critical season, for want of a little mechanical skill.

It is well for every farmer to have at hand the facilities for repairing. In addition to the more common tools, he should keep a supply of nails of different sizes, screws, bolts and nuts. Common cut-nails are too brittle for repairing implements, or for other similar purposes. Buy only the very best and anneal them, and they will answer all the ordinary purposes of the best wrought nails. To anneal them, all that is necessary is to heat them red hot in a common fire, and cool gradually. Let them cool, for instance, by remaining in the fire while it burns down and goes out. One such nail, well clinched, will be worth half a dozen unannealed.

Nothing is more common than for a farmer to visit the blacksmith shop to get a broken or lost bolt or rivet inserted, and often a single nut on a bolt. This must be paid for, and much time is lost. By providing a supply of bolts, nuts and rivets, much time and trouble may be saved. They may be purchased wholesale at a low rate.

These should all be kept in shallow boxes, with compartments made for the purpose, furnished with a bow-handle, for convenience in carrying them. One box, with half a dozen divisions, may be appropriated to nails of different sizes; and another with as many compartments, to screws, bolts, rivets &c.

Every farmer should keep on hand a supply of copper wire, and small pieces of sheet copper or copper straps. Copper wire is better than annealed iron wire; it is most as flexible as twine, and may be bent and twisted as desired; and it will not rust. Copper straps nailed across or around a fracture or split in any wooden article, will strengthen it in a thorough manner.—*Annual Register of Rural Affairs.*

ANTIQUITY OF TIN.—Tin is one of the most ancient metals—that is, it was well known to the ancients; and it is very well established as a fact that the Phœnicians, those olden masters of the sea when Tyre was in her glory, made voyages to Cornwall, and obtained tin from the mines in that district, long before Britannia was known to the Romans. It was this tin, alloyed with copper, which formed the old bronze armor of the Asiatic warriors; and it may have been furnished also by the renowned Hiram, King of Tyre, the great architect and friend of Solomon, for the building of the first and unapproached Jewish temple.

PERSONAL EXPERIENCE IN EARNING A FARM.

Having read in the *Country Gentleman* several ways for a young man desirous of obtaining a livelihood by farming to do, I thought perhaps a few ideas I might suggest would not be out of the way. Although young and inexperienced myself, in the ways of working and by the means of which a farm is obtained, I have often heard my father speak of his experience, some of which I will briefly relate. At fifteen years his mind was fully made up to be a farmer. To that he devoted his energies, and boy though he was, was fully assured that he would never have any other vocation. At eighteen he bid adieu to father and mother, and started with nothing but an ax, which was all the kind parent could give but his blessing, and a piece of bread and cheese from the thoughtful mother. He left the parental homestead, travelled thirty miles, there found employment, and from that day to this never has known want. For the next five years he labored partly by the month, and also by working farms on shares. In those days when working a farm on shares, you boarded with the family, including washing, and had one-third of the profit. In the next five years he laid up $500—was then married, bought a small farm for $750, paid $250 down, with five years to pay the balance. He worked it eight years, then sold, and was worth at that time $2100. Worked a farm on shares for two years—was then worth $3100. Then bought a farm for $4500, having it so arranged that the payments would be made from the grain and meat raised on the farm. When that was paid for, sold again and bought another for $8200. By improving in fencing and building, the farm is now worth $13,000. Many young men, who commenced with nothing, have now good homes, surrounded with all the comforts of life. Working a farm on shares, he thinks, is quite as profitable for a young man as working by the month.—A FARMER'S SON, *in Country Gentleman.*

MANURES FOR GRASSES.

Nearly all the experiments which have been made with artificial manures for grasses indicate that, like wheat, barley, oats, etc.,, the grasses proper—such as timothy, rye-grass, etc.—require a large amount of ammonia. In the park at Rothamstead, which has been in grass for a great number of years, and the crop frequently made into hay and removed from the land, manures containing much ammonia were very beneficial on the grasses, while those furnishing potash, soda, and other inorganic substances, had the effect of causing clover and other leguminous plants to spring up and flourish. This effect was very marked, and the result fully sustains the deductions made from direct experiments on clover, wheat, barley, etc. We are warranted in concluding that clover and other leguminous plants require a larger amount of alkalies in the soil, than wheat and the grasses generally, while the latter require manures rich in ammonia.

Some experiments recently made in Scotland, by Thomas Ferguson, also favor this opinion. Land recently seeded with rye-grass and clover, was top-dressed with various fertilizers. Those furnishing a free supply of ammonia or nitric acid,

increased the rye-grass to such an extent, "that the clover plant was choked, and came up very thin in the aftermath." One hundred and twelve lbs. of sulphate of ammonia, costing $4,50, gave an increase of 1,524 lbs. of hay per acre; 224 lbs. of Peruvian guano, costing $6, an increase of 1,260 lbs.; 112 lbs. nitrate of soda, costing $5, an increase of 1,540 lbs.; 280 lbs. of superphosphate of lime, costing $5, an increase of 292 lbs.; while sulphate and muriate of potash gave an increase of only 30 lbs.—*Genesee Farmer.*

HEALTH OF COWS.

Good health in domestic animals is always a matter of primary importance. As bad health in parents transmits a tendency to disease in the offspring, it is important that every kind of animal we desire to continue on our farms should be kept vigorous and healthy.

As domestic animals are a source of human food, it is a matter of great importance to preserve them in a healthy condition. Diseased meat carries its qualities into the stomachs of the consumers. It is a serious objection which vegetarians urge against the use of animal food, that the bad treatment they receive renders them unhealthy.

As an unhealthy animal cannot consume food to as good advantage as a well one, it is again economical to avoid disease.

Each of these circumstances is sufficient reason for guarding with scrupulous care the health of the animals we feed; but when we derive milk from animals, it is doubly important that they be kept free from every objectionable taint. A sickly cow not only yields a diminished profit, but she yields sickly milk, and sickly in a higher degree than her flesh.

If a cow eat anything that has a strong or disagreeable odor, it appears in her milk.

If she eats anything medical, it comes out in her milk.

If she is feverish, her milk shows it.

If she has sores about her, pus may be found in her milk.

If she is fed upon decayed or diseased food, her milk, since it is derived from the food, will be imperfect. It is as impossible to make good milk from bad food, as to make a good building from rotten timber.

If there is anything wrong about her, it will appear in the milk, as that is an effective source of casting filth from her organism.—*Hallowell Gaz.*

American Exhibitors in London. — The London *Times*, an habitual slanderer of this country, in an article on the American department of the great exhibition in London, closes with the remark,—"Taking the American exhibition as a whole, there is no department in which the exhibitors will reap more profit from their pains, and perhaps this is as high praise as we can pass upon it." There is a trite saying that we should "give the devil his due," and we are glad to award to the *Times* proper credit for this instance of fairness and candor.

For the New England Farmer.

CAN FARMING BE MADE PROFITABLE?

Can those who farm, thereby a profit make?
Why not, if they but farm for profit's sake?
For when our thoughts in one direction tend,
We, as a rule, attain the sought for end.
If, then, the object sought is merely gain,
The course to be pursued is pretty plain.
We first of all must keep our end in view,
In what we think and say, as well as do,
Nor ever from our purpose turn or swerve,
But make all things to that conform, subserve.
If farmers thus would live 'till life shall cease,
Would not their wealth from year to year increase?
But would the wealth thus gained or purchased, pay
For other things they lose, or throw away?
Perhaps it might, but for myself, I fear
'Twould be like Franklin's whistle, much too dear.
How much of money, what amount of wealth,
Will compensate a man for loss of health?
How great must be a farmer's yearly gain,
To counterbalance after years of pain?
How high—to what per cent., should profits rise,
To pay for disregarding social ties?
In footing up, what balance must we find,
To set against a starved and shrivelled mind?
How many bills, how large must be the roll,
For which an upright farmer sells his soul?
Can any sum attain sufficient size,
To justify so great a sacrifice?
And yet, for gain or profit even small,
We sometimes see them offered, one, or all.
But cannot those who cultivate the soil,
Without debasing, unremitting toil,
Obtain therefrom a compensation fair,
Acquire of worldly wealth their part, or share?
That is, if they conform to nature's laws,
And when results are wrong, remove the cause;
Against all wrong, adverse results contend,
And from intruding foes their farms defend.
'Tis true, as soon as plants begin to start,
The birds and bugs and worms will claim their part,—
Not only claim, but take "the lion's share,"
Unless we guard and watch with constant care.
'Tis true, the growing crops are sometimes lost,
Cut down, destroyed by late or early frost;
And when in rich and fertile vales they grow,
Are washed away, if streams their banks o'erflow;
Or if on land that's light, or hill-sides high,
May suffer drought in seasons hot and dry.
'Tis true, the farmer's fruits will sometimes fail,
Or be at least unsuitable for sale;
His stock may sicken, die of some disease,
The fox and birds of prey his poultry seize.
And greater trials too, at times, may come,
And throw their shade of sadness o'er his home.
The farmer's faith and patience thus are tried—
But farming hath a bright and sunny side,
For e'en its darker clouds are "silver-lined,"
And though their pockets all may not thus had,
(At least may not be lined so soft and thick,
As those of some who line them very quick,)
Still, by a process slow, but safe and sure,
They can be lined to last, through life endure.
Just *how* 'tis done, I don't pretend to know,
Nor by my *practice* other farmers show.
But some, at least, the process understand,
And make a yearly profit from their land.
What some *have* done, why may not others *do*,
If they a corresponding course pursue? A. C. W.

Leominster, 1862.

American Hopefulness.—One of the American characteristics which most surprises the good-natured Mr. Trollope in his recent journey

through this country, is the imperturbable good humor and hopefulness of people. He meets frequently people who are ruined by the calamities of the war. They never weep, or wring their hands, or tear their hair. One man, from whom the secessionists of Missouri had taken cattle and crops, and all the fruit of the labor of years, merely remarked in a quiet way, while he picked his teeth with a bowie knife, "Yes, they have been kinder rough with me!" That was all; he had nothing else to say. Mr. Trollope thinks a genuine American never complains and never despairs. Whatever happens in the external world, says Mr. T., "tne *man* is always there."

For the New England Farmer.

SEVENTY MILES BELOW NEW ORLEANS.

FRIEND BROWN:—It is very seldom that you have an agricultural correspondent at a point so far South as this. Perhaps the novelty of the thing will atone for any crudities found in my communication. With the warlike aspect of matters about here, the *New England Farmer* has, of course, nothing to do. If cannon-shot could only germinate, and "grape" produce grapes, what a paradise this land of swamps would become! If every sunken steamer along these shores could be transformed into a hot-house, we might defy even a Northern winter. As one of the results of my "inspection of farms" about here, I may say that green peas in March, new potatoes in May, tomatoes and carrots at all seasons, string-beans at any time, and shelled-beans never; (can't tell why;) upset my almanac completely. So far as garden supplies are concerned, this is a glorious country. I can discover nothing in the climate that should render an uninterrupted succession of garden crops at all difficult; still, they are not forthcoming; and I can only account for the fact by supposing that the natives about here, having obtained one crop, are content to wait till the year comes round again before they plant for another.

The prices of "garden-sauce" might well make a Concord farmer stare. What think you of Irish potatoes, (very small ones, too,) at $1,00 "a bucket?"—the ratio of a bucket to a peck is a problem for you to solve. By the way, I priced some articles at a store, the other day; a bucket (water pail) 75 cents; a Shaker broom $2,00; alum 50 cents a pound, (indispensable for settling Mississippi water.)

Just about these forts, the only specimens of stock that present themselves for examination are alligators—in any quantities and of all sizes. The only field products are water plants. Twenty miles further up the river are the sugar and rice plantations; and to a farmer who sees them for the first time, they are a curiosity. As you sail, not *by*, but *above* them, (the river being full to the top of the levee,) the straight, and almost interminable rows of sugar cane, and the bright green spread of the immense rice-fields, present a beautiful appearance. If it were not that the idea of involuntary labor forces itself continually upon the mind, this would be a paradise indeed. It is common to hear it said, that without slavery this system of agriculture could not be sustained; but I do not believe it. True, it makes one's back ache to see rows of cane nearly a mile in length, and miles in breadth; but it must be remembered that as little or no manure is carried out upon these lands, the pest of weeds, with which in Massachusetts we have to fight such continuous battles, is almost unknown. Most of the labor is finished before the heat of the season becomes severe; furthermore the labor of "haying" is not called for; so that the aggregate of toil is less in Louisiana than in Massachusetts. The main reliance of the people along the western bank of the river between here and New Orleans, seems to be the orange and lemon crop. The amount received annually by the growers of these fruits seems incredible. Why may not the day come, when this amount shall be distributed among a free and happy yeomanry, instead of going, as it now does, into the pockets of a few slaveholders, to be spent in luxury, while the honest producers get only their food and clothing—a scanty allowance of each.

Between Forts St. Philip and Jackson and the "Passes," is a vast extent of country scarcely elevated above the surface of the river, of the greatest possible fertility, perfectly level, and at present perfectly valueless, because liable to inundation. Perhaps the time will come when this region will become one of the most productive and prosperous on the face of the earth. The climate is delicious, though at times hot. Almost every day a sea breeze tempers the heat, so that to even the partially acclimated it is not very trying. During the winter months the temperature must be delightful. The only obstacle to settlement is the danger of inundation. But this difficulty may easily be obviated. A levee, a few feet in height, would afford perfect security; and were the thing to be undertaken on a large scale, these levees might, with the aid of modern contrivances for the purpose, be erected with great facility, and at less expense than many stone walls in Massachusetts. The soil is perfectly free from roots, stones, and all other impediments; and a steam excavator would work wonders. Why may not this region become one day an American Holland? Almost all the tropical plants could be raised here; and the malaria of the swamps give place to the fragrance of orange groves. When the company is incorporated for carrying this scheme into effect, I shall feel that I am entitled to one share, for making this suggestion. B.

Fort Jackson, La., June 30, 1862.

WHAT IS HEAT LIGHTNING?—The flashes of lightning often observed on a summer evening, unaccompanied by thunder, and popularly known as "heat lightning," are merely the light from discharges of electricity from an ordinary thunder-cloud, beneath the horizon of the observer reflected from clouds, or perhaps from the air itself, as in the case of twilight. Mr. Brooks, one of the directors of the telegraph line between Pittsburg and Philadelphia, informs us that, on one occasion, to satisfy himself on this point, he asked for information from a distant operator during the appearance of flashes of this kind in the distant horizon, and learned that they proceeded from a thunder storm then raging two hundred and fifty miles eastward of his place of observation.—*Prof. Henry.*

RYE FOR BRINGING LIGHT SOIL INTO CONDITION TO PRODUCE WHEAT.

In a former volume of your excellent monthly text-book for farmers, the fact was alluded to, that for some years past, since the spirit of research and improvement (in a large degree due to Liebig's discoveries and inculcations) in agriculture more generally set in, large tracts of light, sandy land, some of it so light that it blows and drifts, in Silesia and contiguous districts in Germany, had been much improved by the growing and plowing in of successive crops of rye and lupins—the lupin being a leguminous plant, a small species of bean. It was shown, that, by plowing in these crops in succession the same season, so much humus or vegetable mold was accumulated in the soil, that its color was changed from that of a light sand to that in appearance of a darkish loam, and its quality from that of a merely rye-growing sand to a soil producing fair crops and quality of wheat. Such, if my memory is correct, were the almost immediate results of this simple means of renovating sandy soils—means not costly, nor difficult, nor laborious, nor tedious of application, but so simple and easy of demonstration, as to be within the reach of every cultivator of a farm, however limited his means, or the extent of his possessions; a method of improving poor, light soils, so accessible and economical, that not one of us need allege any other excuse but a want of will and perseverance, if hereafter we allow our light, sandy soils to become unprofitable by reason of a deficiency of humus or vegetable mold in them.

But my object, at present, was to refer to a peculiarity of the rye plant—namely, its power of transforming silica or sand itself into its own growth and substance—*i. e.*, that of its straw.

Rye straw is stiffer than the straw of either wheat or oats, as is shown by its much taller growth, it being equally erect and more elastic than either oat or wheat straw. The greater extent of silicated surface in a crop of rye straw will probably be in excess of that of oats and wheat, for the same number of plants, in about the degree that rye straw is the taller or larger of the three. We cannot determine this with exactitude, nor is this necessary; for, though their composition is similar, wheat will not flourish on many soils, for which, in the same condition, rye does tolerably well. (It is to this fact that may, in part, be ascribed the settlement of Germans on much of the poorest and most sandy land in the West, as for instance the settlement of New Holland, Michigan, and the more extensive, though scattered one north of the Fox or Neenah river, Wisconsin. These plodding, industrious and eminently worthy citizens have been familiar with rye on sandy lands in Germany; and rye bread is their staple food in many instances—hence they can live on lands too poor to support costlier habits.) It is, however, a familiar fact that rye will flourish on soil too sandy, too deficient in vegetable mold to produce a crop, or half a one even, of wheat. The question I wish to suggest is: To what peculiar power in the rye plant is this success due? -When both plants grow on similar soil, there is no essential difference in their general composition apparent. But when rye flourishes where wheat will not, where the soil is too sandy, I have long thought such success due in a considerable degree to the power of the rye plant to dissolve silica in a greater degree than is true of wheat; because its composition, when grown, shows that it did dissolve, for it comprises more in its straw than wheat does.

One reason why wheat succeeds after the quantity of humus or vegetable matter has been increased, is undoubtedly to be found in the greater supply of ammonia or nitrogen, of which wheat requires a little more than rye, that is found as constituent of all vegetable matter in the soil. The substance of rye plowed in, supplies this necessary to wheat. But this does not explain why rye will grow where wheat fails.

If, as I suspect, the success of rye is due to a peculiar power in dissolving silica more rapidly than is true of any of our other well-known cultivated plants, then the inference suggests itself that rye is precisely the plant to prepare silica, and perhaps other minerals, for more delicately constituted plants, like wheat, oats and corn. There are certain elementary forms of mineral matter, which some plants have no power, even with the aid of the great transforming agent, oxygen, to modify or break up. This may be true as to wheat in relation to crude silica, Other plants differently constituted, in some peculiarity, have such a power. This may be true—and if it is not, I am mistaken—of rye, in relation to crude silica.

Often, silica has been changed from its crude form by the rye plant, its original crude and, to wheat, unassimilable form, has been broken up and changed, and thus reduced to a different or new form with new proportions suitable for the nutrition and growth of wheat. We know that one animal can digest and assimilate substances that are impossible of digestion with another. And the succession of different species of plants on the same soil proves something like this to be true of vegetables. If rye has this power, it may be turned to good account in bringing the crude mineral of sandy soils into a condition suitable for the nutrition and growth of wheat, which is of more general importance and value.—J. W. CLARKE, *in Genesee Farmer.*

KING BIRD versus BEES.

It is contended by many who have watched them, that the king-bird does not attack and devour bees, and by others that they do. But whenever the bird was shot and examined, no bees were found. The following fact was related to us a few days since by the observer. Happening one day to be near his bees, and in such a position that a bee could be seen at some distance in the air, going from and coming to the hive, he saw a king-bird perched upon a stake near by, who would dart from his perch among the returning bees, make a circuit and return again. This it continued to repeat. He now became fully convinced that the bird was catching and eating the bees. Upon watching the bird, however, more carefully on his return, he observed that it let something fall each time to the ground. Going to the stake where it had been perched, he found a large number of dead bees scattered upon the ground, every one of which had been burst open, the honey expelled from the sack and eaten by the bird. This accounts for no bees being found in the birds when killed, but establishes the fact that they like honey.—*Prairie Farmer.*

For the New England Farmer.

HOME DUTIES.

Would you see woman in her most lovely character, her most proper position? Then seek her not amid the dust and turmoil of city life, not beneath the glare of gas light in the crowded ball-room, or the round of shopping, calls, and gossiping, where, I am sorry so many women seem so happy, but in the sweet, quiet retreat of a farmer's home.

Home is a word that thrills the hardest heart. Ah! many a worn and weary man, now far away, fighting for his liberty, and boldly facing the enemy, without one tremor of fear, quivers as though in pain, at mention of his home, and will, when night descends in mercy over the bloody scene, weep bitter tears upon his hard, lonely cot, as he thinks of the comforts that once were his, in that beloved spot. And what makes our homes? It is woman. Sneer at her as you will, parade her failings and weaknesses before the public eye, if you choose, but for all that, it is her refining, soothing, refreshing influence, that makes home the loveliest place on earth. A man may have a place to stay, eat, and sleep in, but it is the presence of woman that makes it a home, to be sought, with eager steps, when work is finished for the day, if she exert her powers as she ought, to make it a pleasant spot.

The farmer's life is one of toil. By the sweat of his brow does he earn his bread, and ought not woman to make his resting hours as happy as hours can be, here in this weary world? Shall she not beguile him from his care, make him forget, for awhile, his corn and potatoes, and indulge in a higher enjoyment than mere tilling of the soil affords? It is for her to place the easy chair beside the inviting fire, and on the hearth the soft slippers to receive the tired feet. It is for her to draw up the little table, with its dainty, white cover, and place thereon a glowing light, the evening paper, and a tempting dish of apples, pears or nuts. With such influences, can a farmer do otherwise than forget the hard toil of the day, and revel in a pleasure the city man can never feel?

And thus, to place all the refining influences of home around the farmer's hearth, the woman, the presiding genius of the spot, must not be allowed to work too hard herself. Woman will droop and pine, grow cross and fretful, forget others in thinking of her own aches and pains, if, from the rising of the sun till late into the stillness of the night, she must work incessantly, with no hope of rest, till she finds it in her lowly grave. If there are butter and cheese to make, hired men to wait upon and cook for, and no daughters large enough to help the tired wife and mother, let her hire some one to do it.

To be sure, it will take quite a sum out of your yearly profits; but, my good friend farmer, had it not better come out of the profits, than out of the faithful companion you have chosen for life? Woman is often blamed and found fault with, for not doing more work than she is really able to perform. If woman is true to her nature, if she is such a wife as she should be, she will faithfully do all she is able, and if she come short, know, ye men who carelessly complain, that it is lack of strength, not will.

The calm of a farmer's home is just the place for love and harmony to dwell. Jars, discords, and family quarrels should never mar the lovely scene. What more beautiful than a pretty, comfortable farm-house, nestled among trees, and surrounded by fields of waving grain and rustling corn? All the better qualities of the heart must involuntarily spring forth, amid such influences. And shall it be said that woman fails to do her duty, in such a field as that? No! wives and mothers, be up and doing. Let the subduing atmosphere around you quell all fault-finding, peevishness and ill-temper, and may your influence be such, that the farmer's life may always be, as it often is, the happiest to be chosen. SARAH.

ABOUT CISTERNS.

EDS. RURAL NEW-YORKER:—In a late number of your journal some one wishes to know the best way to make a good cistern, and as I have made cisterns for the last eighteen years, I am willing to give my experience for what it is worth.

Cisterns can be made all shapes and sizes, but the best shape is round, because it is the strongest. A very good size for family use is about 7 feet deep and 6 feet wide when finished. The best way is to wall up the sides with stone laid in good lime mortar, (either stone or water lime will answer, but water lime is the best,) it should then be covered with a brick arch 8 inches thick, the arch to rise about 18 inches, in shape like a caldron kettle turned bottom side up. A place to go in and out must be left in the arch by making a frame of good plank, or plates of iron cast for the purpose, and built solid in the arch. Sixteen inches square is a good size for the opening. Other holes can be left in the arch to receive tubes to conduct in the water, to conduct off waste water, and to put in a pump if needed. The top of the arch should be 10 inches or a foot below the surface of the ground, to keep it from the frost. Another frame should now be made two inches larger than the first, and set on the top of the first one. This leaves a ledge an inch wide to receive a cover made to fit inside the top frame, and fastened, to keep out children and creeping things. It must now be plastered with two coats of good water lime mortar on the inside, and if the work is done thoroughly, you will have a cistern that will last from generation to generation.—*Rural New-Yorker.*

THE TOMATO AS FOOD.—Dr. Bennett, a professor of some celebrity, considers the tomato an invaluable article of diet, and ascribes to it very important properties:

"First, that the tomato is one of the most powerful aperients of the liver and other organs; where calomel is indicated, it is probably one of the most effective and least harmful remedial agents known to the profession. Second, that a chemical extract will be obtained from it that will supersede the use of calomel in the cure of disease. Third, that he has successfully treated diarrhœa with this article alone. Fourth, that when used as an article of diet it is almost sovereign for dyspepsia and indigestion. Fifth, that it should be constantly used for daily food; either cooked, raw, or in any form of catsup, it is the most healthy article now in use."

CAUSE OF HEALTH AND VIGOR.

The following from the Manchester (Eng.) *Alliance News*, describes the habits of a distinguished literary veteran, William Howitt, who has maintained remarkable health and vigor, both of mind and body:

I am temperate, because I have seen and felt the good policy of it. As a literary man, if I had fallen in with ordinary literary habits, I should not have been sitting here to write about the advantages of temperance. If I had lived as a majority of literary men of this age, as "a man about town:" if I had lived in town, and kept the usual late hours, and passed evening after evening in hot, crowded rooms, breathing the deadly poison of physical effluvia, gas and air deprived of its ozone; if I had sat over the bottle at late suppers, foolishly called dinners; and, in short, had "jollified," as my literary cotemporaries call it, I should have been gone 30 years ago.

As it is, I have seen numbers of literary men, much younger than myself, dying off like rotten sheep—some of them in their early youth, few of them becoming old. They have acquired great reputations; for, if you take notice, they who collect about the press, and jollify with one another, and cry up one another as prodigies, are the men who become most popular, and "verily they have their reward."

They reap much money and much temporary fame, but at what price do they purchase it? At the cost of bodily, as well as mental comfort; at the cost of life itself. For my part, seeing the victims of "fast life" daily falling around me, I have willingly abandoned the temporary advantages of such a life, and preferred less popularity, less gains; the enjoyment of a sound mind in a sound body; the blessings of a quiet, domestic life, and a more restricted, but not less enjoyable circle of society.

And now a word on work. Those who imagine that I only wag a goose-quill, mistake a little. In that department, indeed, I have perhaps done as much work as any man living. Often in early years, I labored assiduously sixteen hours a day. I never omit walking three or four miles, or more, in all weather. I work hard in my garden, and could tire a tolerable man at that sort of thing. During my two years' travel in Australia, when about 60, I walked, often under a burning sun of 120 or 130 degrees at noon, my twenty miles a day for days and weeks together; worked at digging gold in great heat, and against young, active men, my twelve hours a day, sometimes standing in a brook. I waded through rivers—for neither man nor nature had made bridges—and let my clothes dry upon my back; washed my own linen, and made and baked my own bread before I ate it; slept occasionally under the forest tree; and through it all, was as hearty as a roach!

LINSEED.—A gentleman who has lately returned from the West reports that the crop of linseed oil will be very large this year, probably quadruple any previous year in Ohio, although in the vicinity of St. Louis it will not be more than double, for the reason that farmers could not procure seed enough to supply their wants at planting time. The high price of linseed last spring, and the low price of corn, in consequence of the rebellion cutting off the Southern markets, is the cause of this great increase. The crop will be ripe about July 20, and will come into market about the 1st of August.

For the New England Farmer.

INSECTS OF MASSACHUSETTS.

MY DEAR SIR:—It gave me much pleasure to notice, in the *Farmer* of June 21, that Messrs. Crosby & Nichols have just published a large edition of "Harris on Insects Injurious to Vegetation," and have put it so low as to place it among the *cheap publications*, and bring it within the reach of every one.

Insects, as every cultivator, whether of the field or garden, the orchard or the flower-pot plant standing on the window-stool, knows by sad experience, now constitute a serious drawback on general cultivation, and unless efficient remedies are applied, they threaten still greater inroads upon the progress of labor. In order to check them, we must annihilate them, and to do this, we must not only form an acquaintance with their names, but the habits of their lives. This calls, I am aware, on the close observation and persevering labors of the farmer or gardener. Book knowledge will not effect it without these. Book knowledge, however, is an amazing good help in directing the course of observation. By treating upon the habits of its subjects, it exposes their vulnerable points, and enables the student to meet them more readily.

Many of our farmers are familiar with Dr. Harris' "Report on Insects," published in 1841, and can speak of its value as a practical scientific work. I can attest its world-wide reputation; for that day, it stood without a parallel. But the discoveries in the science, the appearance of insects new to us, and general progress of things, (this last consideration is a noble omen,) ere a score of years had passed away, called for this new and richly illustrated edition. In consequence of the demise of the author, the preparation of the work was placed in the hands of our excellent Secretary of the Board of Agriculture, Mr. Flint, who readily gathered around him the aid of such men as Agassiz, LeConte, Uhler, Dr. Morris and many others, who were abundantly able as well as willing to add value to its pages from the stores of their own lore. With such aids it may well be supposed that the volume under consideration occupies the first position among works of the kind. The illustrations, which are numerous, are very life-like, so that a child may recognize in them, in midwinter, the butterflies he chased, or the insects that annoyed him in summer.

No library can be complete without this book. Every farmer who buys a copy will not only find it a pleasant and instructive work, but a labor-saving machine to aid him in getting rid of the insect pests that do so much to blight his hopes and ruin his labors every year. It is without doubt the most perfect work of the kind before the public.

With agricultural societies it should hold a prominent position. I know of no way in which they could give more valuable or more acceptable premiums, or advance the true objects of reward-

ing competition better than in the distribution of these books. Indeed, I have heard half-a-dozen say, already, that "that's the kind of premium they would like." Its pecuniary value to trade upon would not, of course, be as great as that of a ten or twenty dollar gold piece. It is not the object of these societies to increase one's financial funds in the amount of their prizes, but rather, to bestow memorials of merit—heir-looms, in whose web future generations may see the results of ancestral enterprise; dead capital laid up to look at and used only on holidays. Such a book is a noble reward for successful effort—a cruse of oil from which any quantity may be taken daily, yet none the less remains, and the book and its teachings go down to posterity a beautiful legacy to the worth of those who acquired it. W. BACON.

Richmond, 1862.

AGRICULTURAL IMPLEMENTS AND MACHINERY.

There are many farmers now in the daily use of approved agricultural implements and machinery, who began their business with the use of the most limited, heavy and awkward tools.

The *shovels* were made of wood, with the exception of a strip of iron across the bottom, split, so as to admit the thin, wedge-like wood, and then the iron hammered down and fastened. The extra labor required to use them must have been equal to one-third of the effort necessary to accomplish a fair day's work. When the material to be removed was wet, it would cling to the wooden blade with such tenacity as to make the work of separating it a heavy and laborious task, and frequently would entirely prevent the operator from separating it from the shovel. In consequence of this, he was not able to throw the loam or manure several feet into a cart or upon a bank, as he can with one of the smooth and light steel shovels of the present day.

The *iron-tooth rakes* were made by the village blacksmith, and were cumbersome and unwieldy things, rather better calculated for harrowing, than for raking.

The *pitchforks* were made at the same forge; they had two tines, with material enough in them for four—were without proper pitch or symmetry, and did not impart that cheerfulness and elasticity to the mind, which a light, well-balanced implement never fails to do, in the hands of an ambitious workman. The handles to both rake and fork were wrought out at the wheelwright's shop, or on the farm itself, and in their proportions corresponded with the iron parts.

The *hoe*, also, was many ounces too heavy, was uncouth in form and pitch, and so rough as to cause the soil always to cling to it when wet. This implement was also made at the village forge. The blade was formed, and then the eye hammered out on the horn of the anvil—instead of being pressed in a "die," as we believe is now done—and then welded to the blade. The work was probably as well done as ought to be expected under the circumstances. But when done the best, the implement was anything but a convenient and pleasant tool. Its great objection, however, was its weight. A middling sized hoe, made of light and tough materials, will weigh two and a half pounds, handle and all; and such a hoe has all the strength that is necessary for use on common soils. On stony, clayey and compact land, a half pound, or even a pound more weight might be required.

Now suppose that *two ounces* extra be added to the two and a half pound hoe, and the person using it works twelve hours a day. Standing by a man hoeing on old land, we found that he averaged 50 strokes per minute, where there were no weeds to be taken out by hand. That would give 3000 strokes per hour, and 36,000 in a day of 12 hours, making an aggregate of 72,000 ounces moved during the time. Dividing this by 16—the number of ounces in a pound—we find that the man using the hoe that weighs *two ounces too much*, that is, more than is necessary, raises about 18 inches from the ground *four thousand and five hundred pounds*, or *two and one-quarter tons* per day!

It may be said that the superior weight, when once raised, will fall with more power, and cause the hoe to penetrate the soil more than if it were lighter. This may be so, but it requires greater care and strength to direct the motions of a heavy body, than a light one, and this will offset this claim. To test the advantage of having a hoe possess just the weight and strength to perform the work required of it, let the operator attach a piece of iron to his hoe, weighing two ounces, and work with it one day. Before night, he will probably feel it affecting him as does the grasshopper the tottering steps of the aged and infirm.

And so it is with all other agricultural implements and machinery. Great advances have been made in this particular. The mechanic has been into the field and tested his work there, and ascertained what was lacking and what redundant. In this way we now, undoubtedly, have the best farm implements and machinery that can be found in any nation of the world. They have so commended themselves, by their own excellence, as to break down the stern prejudices of the most exacting and fastidious. We have spoken of the hoe, only to illustrate our views of the matter; what we have said applies equally to other implements, and to machinery.

Several others among the smaller tools might be mentioned, if enough had not already been said, to show the great contrast between those used by our fathers, and those which we handle with so much pleasure and alacrity at the present time.

The most important *improvements*, perhaps—not "inventions"—have been in the *plow*. On many of our farms men may occasionally be heard relating their experience with the *old Dutch plow*, as it is called, over which they stood and subdued the stubborn glebe in their youth. We have known them to grow eloquent, even, in describing its processes in rocky land, as to how it would throw them across its handles, first on the land side and then on the plowed—until their very bones ached with the concussions. If it were on level land, free from stones, its movements would be disturbed by every pebble or variation in the compactness of the soil, so that it was forever poking its nose out of the ground when its proprietor least desired to see it!

Place it side by side, now, with one of Mr. JOEL NOURSE's iron plows, with the same power to draw them, and we think it will be found that twice as much work will be accomplished in a given time by the iron plow as can be got out of the old Dutch. The mould-boards of the old plow were of wood—but sometimes in the hands of a progressive farmer, who meant to have everything in the "top of the mode," the mould-board would be strapped with hoop-iron, running longitudinally with the mould-board itself. This was a step in advance, allowing the plow to pass with greater ease through the soil, and requiring much less team to draw it. There are many other plows, also, of great excellence, which reduce the prime operation of plowing very considerably from its former cost.

We have said that the prejudices which have so long existed against the use of *machinery*, especially on the farm, have greatly abated. Indeed, they seem to be almost gone, for the manufacturer finds it impossible to answer the demand upon him for several articles of established excellence.

These thoughts have been suggested by listening to a conversation which occurred in the warehouse of Messrs. PARKER, GANNETT & OSGOOD, of Boston, a few days since. A gentleman came from Boxford, Mass., and ordered two Buckeye mowing machines, another from Danvers, and still one from another town. "We have not got them," was the reply. One of the firm then said he had recently returned from the manufactory, and he found them there *eleven hundred* behind their orders!" We learn, also, that the agent of the Wood machine in Boston, has been unable to meet the great demand upon him. The Davis' Improved Ketchum has been sold freely by O. Ames & Sons, Boston, and in one or two instances at the rate of *nineteen* or *twenty* a day, without the aid of out-door agency. The New England machine, which is a new one, is gaining favor, and we understand has had a large sale.

We are glad to notice this spirit of progress. It will tend to preserve health, and increase the happiness and profits of the farmer and his household.

THE BLACK KNOT.

The knots are now making their appearance on the plum and cherry trees, and require attention. Those who will make a careful examination of the excrescence will be able to find small marks upon them, sometimes crescent-shaped like the curculio mark upon the fruit. By a very careful dissection, a minute white speck may be found in the middle of the concave portion of this crescent. This is an egg of an insect. It is believed that the egg causes this excrescence, and we suppose so, because we know that this egg becomes a grub, and burrows in and feeds upon the substance of this knot. These grubs, if raised to maturity, become so like the curculio that stings the fruit, as not to be distinguished from each other. Still they may be different. There are many different kinds of beetles that look much alike. The peabug and the worm in the chestnut, both look much like the curculio, but differ greatly in their habits.

When we cut into the little balls found growing upon an oak leaf, and find there a full-grown perfect fly, and no possible way it could have got there from without, we suppose that the parent of that fly, in some way or other, caused that ball to grow, and that it grew to afford protection and food for her young. This is a natural supposition, and is probably true, although it would be hard to prove. Acting upon such a theory as regards the black knot, we should say cut them off as soon as they appear, and you destroy the embryo insect that would cause similar knots another year.

We have seen both plum and cherry trees about this city, and indeed almost wherever we travel, perfectly deformed with these excrescences, and permitted to stand year after year, mere nurseries for spreading this evil.

Many people carefully cut off these knots early in the spring, and it is well enough to do so even then, as it certainly removes a deformity, but it then avails nothing towards getting rid of the cause.

By careful watching and prompt cutting away during the early part of July, you may keep the enemy under your control, but by neglecting them for a year or two, valuable trees, or even orchards, will become worthless.—*Newark Mercury.*

CURRANTS, TREES AND SMALL BIRDS.

As currants are now becoming ripe I would advise all those who cultivate this fruit to allow them to hang upon the bushes until they are perfectly ripe. I give this advice because I am aware that this fruit is too commonly pulled before it has attained to maturity and has become sweet and pleasant to the taste. Currants and gooseberries make most excellent wine, but not as they are usually pulled, namely, when quite sour.

If peach trees were cultivated like currant bushes by allowing them to spread out around the roots they would perhaps be more healthy and yield more regularly. I have found that leached ashes when placed around the root of a valuable fruit tree that has become in a measure decayed reno-

vates it. The soil should be removed for a space of about 20 feet in circumference around the tree, the leached ashes laid down therein to a depth of four inches and the soil then spread over this.

Of recent years worms and caterpillars have become more numerous and therefore more destructive all over the thickly settled part of the country. They injure our fruit-bearing shrubs and trees in a most serious manner, and this evil appears to increase in magnitude every year. It is my opinion that this is in a great measure due to the very general destruction of small birds, by men and boys who proceed from cities on holidays, and shoot harmless birds to obtain what they call sport. Most of these birds feed on insects and their larvæ, and they are therefore, the friends of man, keeping down insectoria. The destruction of the little birds should be prohibited by law. I recommend every man who has a garden, to put up bird houses and cultivate the society of wrens, blue birds, &c. These "warblers of the grove," feed upon moths that prey upon bee hives, and they are also enemies to the grape-vine caterpillar and many like pests of vegetation.—*Scientific American.*

LITTLE KINDNESSES.

BY ROWLAND BROWN.

Little drops of dew
Give life to fainting flowers;
Little moments beating true
Make up this life of ours.
From the tiny acorn springs
Proudest of majestic trees;
And from little fluttering wings
Fall the sweetest melodies.
And as little golden seeds
Glorious harvests may impart,
So will little kindly deeds
Make a Heaven of the heart.

Dost thou sometimes doubt thy strength?
Dost thou weak and trembling feel?
See! the little trickling stream
Turns at last the giant wheel.
See the beauteous coral isle,
Mark those grottoes of the wave;
They should make thee wear a smile,
And thy heart grow bold and brave!
For, like daisies from the sod
To the winter-weary heart,
So, the weakest child of God
May some thrill of joy impart.

THE DWELLING OF ANTS.

Ants, in the exotic regions, construct habitations of considerable size, and form large communities, consisting of a king and queen, soldiers and laborers. Such especially are the white ants, whose nests, formed entirely of clay, about twelve feet high, and broad in proportion, soon become clothed with grass, and when a cluster of them are placed together, they may be taken for an Indian village, and are in fact occasionally larger than the dwellings of the natives. These dome-like buildings are sufficiently strong and capacious to inclose and shelter the interior from all change of weather, and the inhabitants from the attacks of natural or accidental enemies. They are divided into a number of apartments, for the residence of the king and queen, and the nursing of their numerous progeny; as also for magazines or granaries, where provisions of various kinds are kept stored. The royal chamber occupies the centre of the building; and on all sides, above and below, are arranged a kind of ante-rooms, containing both soldiers and laborers, who wait there either to guard or serve their common parents, on whose safety depends the well-being of the whole community.

HABITS OF THE SHAD.

The habits of our fish have been very little attended to in this country. Our scientific men, it is true, have been very precise in their accurate classification, and in the use of their ponderous nomenclature; they have described our fishes even to the shape of a scale, or the number of thorns in the dorsal fin, but they have not condescended to note their habits, their food, their length of life, with all such particulars as would interest common readers, and be of use to mankind.

No fish is more valued, or more valuable than the shad; yet but few of its habits of life are known. The books are silent, and angling gives no information. It was for a long time a commonly received opinion that the shad spent the winters in the Gulf of Mexico, and then as spring advanced, and the snow ceased running, came along the coast, and entered the rivers in succession. If this were true, there would be no uniformity, year after year, in the run of shad in each river. The very distinct varieties would all become intermingled. But each river has its own variety. Those of Connecticut river have long been known as possessing superior size and flavor to any others. The variety that seeks the Hudson as a spawning-ground is easily distinguished from ours. The fact of the distinctness of the varieties in each river tends to the belief that shad go no farther than the mouth of the stream in which they are hatched.

The habits of the shad are unlike those of other fish. As soon as the snow-water has ceased running, they press up the river as far as they can reach, in order to deposit their spawn. In following this instinct, they never stop for refreshment, or food. Whoever found anything in the maw or stomach of a shad that would indicate the nature of its food? Whoever knew them to bite a baited hook? They do not feed from the time they enter the stream until they sink down, thin and exhausted, into the deep places at the mouth. For this purpose of nature the shad has been preparing itself during the quiet luxuries of a winter, and has become fattened for the use of man, or, if it escape the net, for the reproduction of its species. The shad lives but a single year. It is hatched in the early summer; descends the streams as soon as large enough; feeds and fattens in the winter at the mouth of the stream; ascends in the spring to deposit its spawn, and descends to die at the bottom of the ocean. This fact accounts for the uniformity in the size of the fish. A Connecticut river shad seldom goes beyond seven pounds, and the variation in size is comparatively slight. The bass, on the other hand, which is known to live many years, varies from half a pound in weight, to fifty, even in our own river. It has a longer time to grow, and shows a much greater diversity of size. These considerations have led to the conclusion that one

year was the duration of the shad's life. What was only a matter of conjecture and inference, has been lately proved by the artificial fish-breeders. Somewhere in the State of New York, one of these raisers of fish from spawn which he fed in early life with crumbled crackers strewn upon the pond where they were kept, has proved their short hold on existence. He raised them for the purpose of supplying the very large fish he had in his tanks and ponds with food. As the science of breeding fish is known more, the habits of the different species will be more easily described.—*Hartford Courant.*

For the New England Farmer.

HOW TO MAKE MANURES.

MR. BROWN:—There seems to be a desire by farmers to know what course to pursue in regard to worn-out or neglected land. My experience and observation teach me that the barn-cellar, if properly managed, is the best bank stock that a working farmer can have. A dairy farm of from twelve to twenty cows will make, from spring to November, one hundred and fifty to three hundred cart-loads of first-rate manure for fall seeding or top-dressing, if the proper materials are furnished, at a very small cost. Among these I would recommend for the stable, sawdust, where it can be had, spent tan or sand; with a bountiful supply of sand, loam, muck, or almost any other kind of earth, carted into the cellar as soon as convenient after planting. A good supply placed under the stable to receive the droppings and liquid manures, and the rest tipped up or piled up, by the side, so as to be convenient to be mixed with the manure as often as once, twice or three times a week, as circumstances will admit. There is not an industrious farmer, or one who has help, who can receive so much profit from his labor as in spending his spare hours or rainy days in levelling down his manure, and mixing in his materials, which are provided, and in this way increase the products of his farm beyond his comprehension.

HOW TO KILL SEEDS OF WEEDS.

Mr. B. T. Stephens, of Waterville, Me., asks, "How can manure be managed to kill the seeds in it, and thus escape the trouble of constantly hoeing and pulling weeds?"

In the first place, put no weeds into your barn or cellar after they have come to seed; next, allow no weeds to get ripe in your fields of corn or potatoes; sow as little English grain as possible where you intend to plant; seed down your land to grass with the corn crop, by the use of the horse-harrow, and a little use of the hoe to keep it perfectly level, and destroy the weeds. A few days in August will destroy in your hoed crops more weeds than farmers are aware of.

Northboro', July, 1862. A SUBSCRIBER.

IF YOU have an evergreen, or Norway spruce, balsam fir, American spruce, or any of the pines, and desire to make it grow more compact, just pinch out the bud from every leading branch, all around and over it. Repeat this process again next year, at this time, and your evergreen will continue thereafter to grow thickly.—*Indiana Farmer.*

For the New England Farmer.

AGRICULTURAL READING.

MR. EDITOR:—It is universally allowed by intelligent men, that the highest degree of success in any vocation is attained by those who have the best practical knowledge of the principles which underlie that calling. The experience of our predecessors, with the deeds of whose lives we are conversant, affords ample proof of this assertion. Ignorance, let our pursuit be what it may, can only lead us astray; it never can guide us in the way to prosperity. To the farmer, these truths are of the first importance, showing, as they do, the necessity of a good understanding of his business. To throw light upon the subject of agriculture, by the aid of the pen and the press, has been considered a thing superfluous, and by many actually injurious. The information handed down from father to son, was deemed amply sufficient for a successful career in farm-life. But the times have changed, and with the times, the opinions of men, in a good degree; and now the great question among our intelligent cultivators is, What are the means by which we may be enlightened in relation to our profession? This is a question applicable to the age in which we live, and the answers as various as the means are numerous.

I look upon the agricultural press as one of the most efficient aids of the farmer. Here is displayed the united talent of the theorist and the practical man. Here the accumulated knowledge of the past, augmented by the investigations of the present, is laid before us in appropriate form, and in language easily comprehended. The good, progressive farmer is a student, pushing his investigations with that devotion and intelligence which characterize his plans and labors upon the farm. Standard agricultural works occupy a prominent place in his library, and the popular journals of the day, which treat of his profession, find a ready welcome and an eager perusal, by his fireside. Who, then, will marvel when they witness the success of such men—men who have labored "to improve both the soil and the mind?" But we are oftentimes told that much which is written upon agricultural topics is mere speculation, and never can be applied to practice with favorable results. This we admit in a measure, but let us inquire, Is it necessary to reject all agricultural reading, merely because an occasional article is submitted to our perusal, incompatible with the principles of that science which it is intended to enlighten us upon? No intelligent farmer will give an affirmative response to a question of this nature. Proper discrimination must be exercised concerning matters of this kind, or we can never hope to profit thereby. If we read an article which at once appears to contain a multiplicity of absurdities, we do not usually allow the article to be laid aside, with merely remarking that it is incorrect, but we strive to collect evidence which will place its incorrectness in a clearer light; and in this elucidation of its falsities, our attention is often directed to subjects which might never have been considered, if there had been no occasion like this to call them forth.

I long to see the art of cultivating the earth raised to a higher state of perfection. This can be accomplished only through the instrumentality of a more varied, practical and thorough knowl-

edge of those great principles upon which it is based. I say, then, let the agricultural press—the herald of true progress in this sphere, still go on fulfilling its mission. Let the farming community, by diligent study, acquire more liberal views of their calling, and of the means for its promotion, and thus more successfully pave the way for genuine, progressive farming. J. H. G.

Hubbardston, April, 1862.

EXTRACTS AND REPLIES.

BLACK WARTS ON TREES.

Will you or some of your writers inform me through your paper how to prevent what I call canker worms from getting in plum and cherry trees? They cause a hard, black bunch to grow on the branches, and spoil the tree.

Norway, Me., July, 1862. SUBSCRIBER.

REMARKS.—Cut them out carefully and thoroughly as often as they appear. The following is from the *Country Gentleman*:—

In conversing with a friend a few days since, he informed me that he had been successful in removing the black excrescences that have proved so injurious to plum trees, as follows: Saturate the knot with spirits of turpentine, and in time it will dry up and heal over. He thinks the disease is caused by an insect, which the spirits of turpentine destroys, and thereby remedies the evil. He had recommended it to his neighbors, and in all cases it has proved alike beneficial. In looking over some of the back volumes of the *Cultivator*, I find the general remedy recommended is excision, and knowing that this sometimes proves injurious to the tree, I thought I would send you this remedy—so simple and yet so beneficial—for publication, not doubting but that I should get some ideas in return from your correspondents.

I see the cherry is affected, in some sections of the country, with the black knot, and I presume the above remedy will prove alike beneficial to them.

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COLD AND WET.

Such is the present month of July. Already have there fallen *five inches* of rain, and in very few of the days has the mercury, on a fair exposure, risen above 70°. These facts are extraordinary, and must essentially modify the products of the fields and gardens.

My thermometer distinctly indicates summer heat as 76°. When the mercury for weeks in succession, fails to reach this point, we may begin to query whether all is going rightly on.—My corn looks green and luxuriant, and rises a foot or more above my head, as I walk among it; but still, it needs heat to fill out and mature the ears. Grain of all kinds appears to be doing well. This matures with less heat than corn. Potatoes were never better than the present season. I hear nothing of the rot. "Seed time and harvest" have come for the last seventy years, and I have no reason to fear that they will fail us. I have much more fear of the ugly secession spirit abroad. God grant that this may be suppressed, and this speedily. P.

Essex Co., Mass., July 26, 1862.

CROP OF GRASS.

I learned to-day, that this will come short by at least *one-quarter part* of several years past, on the splendid farm of Gen. Sutton. As every one knows that he spares no expense or effort to make his lands as productive as possible, the deficiency must be charged to the malign influences of the season. This is contrary to the general impression of the season. Perhaps it may be chargeable to the *war*, as he is a Major General of long standing, and his attention must have been diverted from the farm, by the enlistment and organization of troops,—the all-absorbing topic of the day. The truth is, farmers must attend to their business, if they would have their barns full in due time; if they do not look to their farms, their farms will not sustain them, whatever may be their official station.

Essex Co., July 26, 1862.

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"A PAIR OF TWINS."

We very frequently hear and use the expression, "A *pair* of twins," evidently meaning two born at the same time. But, strictly speaking, is this a correct expression? Is it true that two produced at the same birth constitute a *pair* of twins? Two, doubtlessly, constitute *twins*, but not a *pair* of twins. As it takes two to make twins, it must certainly take twice as many, or four, to make a pair of twins. If I am correct in this—and I believe that I am—it is very seldom that we see a *pair* of twins, although *twins* are often met with. A CONSTANT READER.

Pawlet, Vt., July, 1862.

LEACHED ASHES.

Prof. Buckland, the able editor of the *Canadian Agriculturist*, says:

"Wood ashes always contain a considerable amount of carbonate of potash, lime, etc., and are consequently very beneficial to such plants as require large quantities of these alkalies, such as Indian corn, turnips, beets and potatoes. Leached ashes have lost much of the principal alkaline salts, and have been deprived of the greatest part of their most important soluble ingredients; still they must not be regarded as an unimportant fertilizer, and other matter which they contain is always more or less beneficial to the soil. Unless the land is well worked and contains sufficient organic matter, we should not consider ashes, whether leached or unleached, as alone adequate to the production of a good crop of wheat, turnips or corn."

There is something about old leached ashes that we do not understand, though we have given the subject considerable attention. We have seen instances where old leached ashes have had an excellent effect on wheat, while unleached ashes seemed to do no good. We have thought that perhaps the potash and soda which had been washed out, were replaced by ammonia and nitric acid from the atmosphere. The subject is one worthy of investigation. At all events, it is certain that leached ashes frequently have a very beneficial effect; and if the above hypothesis is true, the older they are the better.

For the New England Farmer.

MEANS OF AGRICULTURAL KNOWLEDGE.

MR. EDITOR:—What are our principal means of obtaining a knowledge of agriculture in New England at the present time? I make this inquiry, because I wish to know whether or not we are employing sufficient means for the education of the rising generation who are to occupy the land of their fathers, and to cultivate its rugged soil. New England is comparatively a hard, rocky and barren soil; but, under skilful cultivation, it is capable of producing all the necessaries and many of the luxuries of life in great abundance. Still, in order to compete successfully with other portions of the country where but little knowledge and effort are required in cultivating the earth, the New England farmer must possess superior knowledge of the business so as to be able to husband all his resources to the best advantage. It will not do for him to skim over the surface, to scratch the soil and cast in his seed, and expect an abundant harvest. No; what he most needs, is practical knowledge or science; for it is this alone which can enable him to render the rough and rugged soil of New England productive.

Let us briefly enumerate some of our principal means of acquiring agricultural knowledge, and endeavor to ascertain our real condition and prospects.

The first means of acquiring this knowledge is in the family, on the farm. This is very different on different farms, and in different towns and neighborhoods. On some farms, it is good, very good; on others, it is tolerably or indifferently good; on others, again, it is useless, or worse than nothing. It is no where uniform, methodical, systematic, or scientific. On one farm, the operations are all performed in a very careless, slovenly and unskilful manner; on another, they are all performed very differently, and are followed with very different results. Still, whatever may be the errors and defects of family instruction on the farm, it ought not to be underrated or held in disesteem, because in most families, and on most farms, it is doing an immense amount of good, and imparting a great amount of knowledge to the young.

The second means of knowledge consists of newspapers, periodicals and books, professedly treating of the science and practice of agriculture in all its departments. And it is greatly to be regretted, that these admirable means of knowledge intended for the benefit of all, should be improved by so few; that any unreasonable prejudice should prevent any one from receiving that instruction from books and newspapers which he would gladly and thankfully receive from the lips of a friend.

The third means of knowledge consists of the example, conversation and advice of neighboring farmers. A good example, accompanied by gentle words and useful advice, will have a great effect on youthful practice. The influence of such farmers is very great. The young are naturally inclined to imitate their superiors and elders in every kind of business. This is peculiarly the case in farm operations, in which every improvement is readily adopted and reduced to practice.

The fourth means of knowledge consists of farmers' clubs and town agricultural societies. In every town where there is a farmers' club established for the discussion of agricultural subjects, there is generally an excellent school for young farmers. These farmers' clubs are generally made up of the best and most skilful farmers in the town; of men who read and think and reason, and, in all their discussions, aim to let their light shine for the benefit of each other. Mutual instruction is what they aim at, and not to astonish the world by an exhibition of some great montrosity of nature or art. They have no premiums or State funds to bestow on unworthy objects. They see clearly, that the State's money which is now annually distributed among the several county societies so liberally, ought to be so managed as to impart knowledge to the great mass of young farmers, instead of being squandered away in county towns upon trifling and doubtful objects.

Such are some of our principal means of acquiring agricultural knowledge. Are they adequate to the purpose of imparting a thorough knowledge of agriculture to the rising generation? If they are, we ought to be satisfied with them, and endeavor to use them to the best advantage. But if these means are not sufficient, we should make use of additional means, so as to secure a greater amount of knowledge. It is obvious to every one, that the strongest man is not necessarily the best farmer. There is something which is better than physical strength, and which can accomplish more. It is knowledge which is able to overcome brute force, and subdue the ferocity of the tiger. The knowing farmer can always excel the ignorant farmer whatever be his physical strength, because his superior knowledge gives him additional skill in his business. In New England, the head as well as the hands must work. There cannot be much success in farming, where there is a lack of knowledge; for it is knowledge which enables the farmer to raise the largest crops, at the smallest cost, and with the least effort. How to do this successfully, the science of agriculture alone can teach. At the present day, the farmer is placed in such close proximity with almost every department of science, that it is difficult to determine what should be the extent of his knowledge.

Warwick, Mass., 1862. JOHN GOLDSBURY.

HABITS OF GRASSHOPPERS.

A Goliad correspondent of the Colorado (Texas) *Citizen* gives some curious facts in relation to the grasshoppers which have recently swarmed in that region. He says:

They have an especial fondness for wheat and cotton, but don't take so kindly to corn. The only vegetable they spare, is the pumpkin. The most deadly poisons have had no effect upon them; fumes of sulphur they rather like than otherwise; musquito nets they devour greedily; clothes hung out to dry they esteem a rarity; blankets and gunnybags they don't appear to fancy. They swim the broadest creeks in safety, sun themselves a while, and then go on. The whole mass appear to start at the same time, travelling for an hour or two, devouring everything in their way, and then suddenly cease, and not move perhaps for a week, duirng which time no feeding is noticed; and finally, they carefully avoid the sea-coast.

GREEN HOUSE ENGINE.

The Messrs. Cowing & Co., of Seneca Falls, N. Y., have been known for years as the manufacturers of iron pumps of various patterns, chain pumps, garden engines, &c. This year they have introduced a new green house engine—a representation of which accompanies this article. It consists of a small force pump firmly fastened into an iron pail. It can be carried quite easily when full, to any desired spot, and can be worked with one hand. We have one in our possession which we have tried, and find it will throw a small stream

a distance of 40 feet, and at the rate of two or three gallons a minute. Simply for watering plants, the necessity of renewing the supply of water so often would make it of little more value than the common watering pot, but in washing windows or carriages, in throwing water to the centre of flower-beds which cannot be easily reached in liquid manuring, or in throwing such compositions as soap suds, tobacco water, &c., upon the foliage of trees and plants for the destruction of insects, it appears to us to be a valuable article. The price is $8,00, and it would be hard for any one *not* to realize the interest of this outlay from its use

STEEL AMALGAM BELLS.

Messrs. Cowing & Co. have also sent us one of their new bells, made of the above material. They are of several sizes, and designed for farms, engine-houses, school-houses, churches, &c. The ma-

terial of which these bells are constructed gives them strength and sonorousness, and at the same time enables the manufacturers to sell them at a price much less than other bells of the same weight. We can remember the sound of the *dinner horn* which we used often to hear in our younger days, and can remember, also, that it took a powerful pair of lungs to make it heard at any considerable distance. In those days, we should have been glad to have had the bell speak for us; and we doubt not there are many farms now, beyond the reach of the steam whistle, where one of these bells would be a welcome signal of the dinner hour, and where its stirring tones at sunrise, its warning voice in case of fire or accident, and its merry peal on festive occasions, would more than pay its cost.

GRAPE CULTURE.

The following is a postscript to a letter, received a few days ago from our much esteemed old friend, whose name is signed to it. His success in grafting the grape is very satisfactory:—

Shall I inform you of my success in grafting the grape-vine this spring? This morning I set grafts of the last two varieties on hand. I grafted the first about the middle of March on to the beginning of April, then stopped until about the middle of June; then, as time would permit, stuck in a few occasionally until this day, 2d July—all in the roots, or in branches laid under ground. Many of the grafts have already made a growth of four inches to four feet, *one* is bearing a cluster of fruit and some of those grafted ten days to two weeks, are pushing already. Of about one hundred grafts set, at least eighty will grow; and of these one hundred grafts, representing thirty varieties, I will have *every variety* to grow!

Last year's grafting are now strong plants, bearing from one to a dozen branches of fruit. By this mode of propagation a new variety may be fruited the second year for certain; while in planting the delicate, forced pot plants we must wait four to six years before fruit can be looked for "Time is money" in more ways than one.—*J B. Garber, in Germantown Telegraph.*

GRAVEL IN OXEN---A REMEDY.

During the latter part of March I had a noble ox taken suddenly sick, giving signs of great pain and an evident desire to discharge urine. Frequent pulsations of the urethra (always observable when cattle are voiding their urine) were noticed, which continued for several hours, the ox frequently lying down or standing in a stretching posture. After twelve hours, the pain with which he was at first taken appeared to somewhat abate, but there was no discharge of urine. Various remedies were administered, such as spirits of nitre in large quantities, and liquor of pumpkin seeds, but of no avail. He remained standing until he drew his last breath, when he fell to the ground. Not a muscle was noticed to move after his fall.

Upon a post mortem examination, the cause of his death was very apparent. It was, as I had supposed, an obstruction of the urethra. A stone had formed in the bladder, and then passed down the natural channel of discharge, until it reached the cod; here it became lodged, shutting up all passage for the escape of urine. The stone, which was of an oval, oblong shape, was not larger than an ordinary cranberry bean. It is composed of lime, similar in appearance to the crust collected on the inside of tea-kettles, but was covered with a membraneous substance, doubtless formed after it became lodged, in consequence of inflammation taking place.

Since losing my ox, I have learned of several that have died of the same disease. Also, of two cases where cures have been effected in the following way: When you are sure there is an obstruction, the animal should be thoroughly examined by feeling the whole length of the urethra, if possible, to ascertain where the obstruction is. But if you fail to find where the obstruction is located, make an incision into the urethra where the pulsation I have observed is observed. If then the animal does not discharge his urine, you may be sure the obstruction is higher up, and so large that it cannot pass down the natural channel. This may be removed by inserting a catheter and crowding it back. If the difficulty is below the incision, the animal may ever after continue to discharge the urine from the orifice made, without any detriment to the health of the animal. There is a case of this kind near here, which has been in this situation for three years.—J. I. KNAPP *in Rural New-Yorker.*

"NOTHING TO DO."—We have for several years known an elderly farmer, whose fields are level and well adapted to the use of the mowing machine, but who could not surmount the idea that machinery is a plague on the farm. So at early dawn he has bent over the scythe on his broad acres, until he has acquired a bend in his back that no medicament can cure. This year, the pressure was too strong for him. He heard the "clack" of machinery all about him, and saw his neighbors clearing their fields at the rate of two acres to his one. He could stand it no longer. A Wood machine was purchased, and proved a good one, and now he may be seen early in the morning under his beautiful trees, feeding the poultry, or slowly following his fine cows as they nibble the sweet grass on the roadside, on their way to pasture. He is in no hurry, not he. He sits twice as long at the breakfast table as he did last year, and thinks the food tastes better than it did then. He rises early, to be sure, and his practiced eye scans everything, and sees that all is right. The horses are hitched to the machine about nine, and, presto, before twelve there is as much grass down as all hands can take care of. He thinks he can earn more in the time which he has to bestow upon his stock and his care of "little things," than he ever did in the mowing field. Indeed, it seems, he says, as if he had "NOTHING TO DO!"

BENEFITS OF AUTUMN PLOWING.

The tillage and drainage of the soil are very closely related to each other. So indeed are the tillage and manuring the soil. And these, not merely as cause and effect are related—though drainage does enable tillage, and tillage does alter composition—but as being operations of the same class and kind. And thus Mr. Bailey Denton, though engaged in a lecture upon land drainage, could not help referring to the steam plow—as the great tillage implement of the future. And we had from him, too, the striking fact bearing on the composition of a fertile soil, that in a state of perfect tilth one-quarter of its bulk is air.

Mr. Smith, of Lois-Weedom, says that in all clay soils containing the mineral elements of grain, perfect tilth dispenses with the need of manure; and there cannot be a doubt that a deep and thorough tillage enables soil to draw immensely on the stores of vegetable food contained in air and rain. Messrs. Hardy again say that perfect tilth dispenses with the need of drainage, and there can be but little doubt that deep and thorough tillage facilitates the operation of whatever drainage may exist, whether it be natural or artificial.

In both these cases the useful lesson is well taught, that it is true economy rather to put the cheap and copious storehouse of Nature's agencies to its fullest use, than by laborious and costly artificial means to imitate expensively their operation.

Such a lesson applies, beyond the *advantages* of tillage to the methods by which tillage is obtained. Among the earliest suggestions of cultivation by steam power was that of reducing by its means the soil to tilth at once. The land was to be torn down as the deal is torn down at the saw-mill; though before the machine it may have been as hard and firm as wood, behind the tool as it advanced at work it was to lie as light and fine as sawdust. But it has at length been found that it is better because cheaper, and more perfect, too, to leave this last refinement of the tillage process to the weather, which does it without cost. The land is now torn—smashed up—or moved and thrown about by plow or grubber in great clods and lumps. This is best done in dry autumn weather, and thus it lies till spring. Certainly no climate is better adapted for cheap tillage than the English—the rains and frosts of winter following a dry September and October must penetrate and thrust asunder the clung and hardened masses of the soil. No two particles shall remain adher-

ing to each other, if you only give room and opportunity to the cheapest and most perfect natural disintegrator in the world. No rasp, or saw, or mill will reduce the indurated land to soft and wholesome tilth so perfectly as a winter's frost. And all that you need to attain its perfect operation is, first to provide an outlet for the water when it comes—by an efficient drainage of the subsoil, and then to move the land while dry and break it up into clods and fragments, no matter how large they be, and leave them for alternate rain, and drought, and frost, and thaw, to do their utmost.—*London Agricultural Gazette.*

WHEN TO CUT BUSHES.

We have no doubt but that late in summer, when the growth of the season is just ended, and the plant has expended all its energies in growing, and is just falling into that rest so essential to vegetable maturity, is an excellent time to behead these plagues of the farm. But we have tried another season, when the labors of the year were not quite so pressing as is usual in summer, or early autumn, and have found it so successful in our case, that we hold it worthy of commendation to others.

Many years ago, there was a dense patch of willows on a swampy spot at one end of the meadow. They covered about half an acre, and were so thick that any animal, biped or quadruped, would find it difficult to pass through the thicket. It was waste land, good for nothing unless it were for wasps and hornets to occupy in rearing their young, or for the bob-o-link to pour out his noisy clatter. More than this, it was a grievous eyesore, that closely embodied phalanx of willows in full view of the highway, and the first object that greeted the eye in one direction from the windows.

It was in our school-boy days, and it so happened, as was then customary in New England, our school adjourned over from Wednesday night before Thanksgiving, until the following Monday, to give the teacher time to go home and visit all his cousins and neighbors, the big boys to skate and attend turkey shoots, and every one to enjoy themselves in the ways best suited to their fancy.

Cold weather had set in, in earnest. The ponds were all frozen over, and the streams flowed noiselessly along under their icy blankets—dark clouds chased each other across the horizon, occasionally spitting snow as from very spite, and the hoarse north wind piped in doleful notes the birth of the season of storms and snow-drifts, of sleigh-rides and singing-schools. Of course, our old enemies, the willows, were firmly lodged in winter quarters. At least Jack Frost had one of them firmly secured in his unflinching, relentless vice. Taking that fact into consideration, in connection with the other more important one that we had two whole days all our own, to do what we pleased, with the proviso that we must not be pleased in doing any sort of mischief, we resolved to open speedy hostilities on our old, hateful enemies, the willows, and accordingly with a sharp axe in hand, we commenced our warfare, cutting them off smoothly and rapidly just below the surface. Our progress in the business was very good in these two cold days. The improved look of the meadow was an ample compensation. We have no doubt we made better progress in our studies that winter for the triumphs of this two days' labor. But this was but the beginning of the end in this business. The removal of the willows revealed old logs and stumps; and there must be drains cut to take off the water that had fed the willows. So it was concluded to fence off that end of the meadow for pasturing, while this operation was going on.

The result was this: The bushes were cut so low, that the first thaw covered their stumps with water, which froze firmly over them. Whether they drank too much in this drowning process, we shall not presume to say. This we know, however, that the subsequent growth was a very feeble one, and the browsing of the animals pastured there, completed the work of destruction so effectually, that on restoring the old swamp to the meadow, it was destitute of willows as the desert of Sahara.

We have another piece of swamp, on which much earth had been carried by artificial means, and which in 1859 had become a tangled mass of willows and alders. In January of 1860, we cleared off a portion of this swamp by cutting the crop in the same way as before, just below the surface, when the ground was frozen. Two seasons of growth have passed since then, and the new sprouts make but a very feeble show. Another cutting, which can be effected in a very short time, would probably eradicate the bushes entirely.

Now we do not claim that we have taken the best time to cut our bushes. We state when we did, how we did it, and the result, leaving it for the intelligent agricultural world to draw their own inferences. We think, however, that in winter, if frost favors the object, and there is no snow to obstruct, it is the best time for us, for then it will not interfere with the ordinary duties of farming, and labor is cheaper. Then the bushes being firmly frozen in, every blow of the axe will tell, and there is no mud to annoy the operator. We have some belief that the freezing and thawing over the stumps, and the water that settles over them in spring, has something to do with drowning out these mischievous aquatic shrubs.—WILLIAM BACON *in Country Gentleman and Cultivator.*

BUCKWHEAT A BAD CROP FOR THE SOIL.

J. W. Colburn, writing to the *Country Gentleman*, says:—"In the last number of your paper, Mr. Holden, of North Clarendon, Vt., inquires for the reason of a poor crop of corn the next year after a crop of buckwheat on the same land.

I can give him what little experience I have had in this way. Several years ago I turned in a light crop of grass the last of June, and sowed the sward to buckwheat, and had a heavy crop. The next year manured the same field well, and planted to corn. It came up feebly, looked pale and sickly for all the first part of the summer, but seemed to recover in a measure towards the latter part, but did not mature before the first hard frost so as to make a fair crop of sound corn—a fair growth of fodder with an undue proportion of soft corn. Not thinking that the previous crop had much to do with the failure of the one following, and liking a crop of forty bushels per acre of buckwheat, which is good swine feed, I repeated the same process within a year or two after, and

with the same results. I then made up my mind that buckwheat is not only an exhausting crop, but that it leaves the soil unfit for a good crop after it, until it can recover from the deleterious effects of the buckwheat. It seemed to create an acidity in the soil, for I noticed before plowing the next spring, that sorrel started up plentifully. I abandoned the growth of buckwheat from that time, and have never found any other crop that left the soil unfit for a good crop of corn, with proper preparation and culture.

In my case I lost more on the corn crops than the whole value of the buckwheat. A crop that will create a cold acidity in the soil, so as to sensibly affect the one following, is unfit to be grown upon a good soil. Buckwheat will thrive fairly on rather poor, sandy and gravelly soils, if the season is not too dry. If I had such land, and was desirous of cultivating this crop, I would put it upon this kind of soil once in two years, letting it rest the alternate year, but never upon good soil designed for corn the following year. No crop that can exhaust more than the value of a crop can be a paying one in the long run on good productive lands."

For the New England Farmer.

CANKER WORMS---ORCHARDS.

MR. EDITOR:—Your correspondent, "W. N. Shaw, Esq.," has told us a terrible tale of the canker worm upon his premises. If anything would make a farmer shrug his shoulders and forget to skip a few hard words, it would be his promising orchard, well invested with the canker worm.

This would seem to be the proper time for scientific study, and to apply the remedy. Now, we know exactly where the enemy lies, that by its silken cord, it lets itself down to the ground within the limits of the branches of the tree from which it had foraged. How can we destroy this grub now so near the surface, among the grass roots, waiting to be transformed to do its wicked work the next spring? Placing heavy paper around the tree and taring, stops a great many grubs, but it must be watched, and the tar often applied. Some apply directly upon the bark, but this endangers the health of the tree, while others have tired themselves and ended their labors in disgust.

It has occurred to me to sow salt or alkalis freely under the trees, particularly in mowing orchards, then use the Michigan or double Eagle plow as soon as it is the proper time to sow grass seed, and at once stock it down to grass again, which will largely increase the crop for the next year, even without manure. By this process, the grub will be well salted and the sward furrow will be deeply and perfectly buried. No other plow could do it so well, in my judgment. It is about time to sow grass seed.

It is said this grub begins to move for the tree a long time before the frost is out of the ground. If so, it is nigh the surface; a deep burial and a reverse position might effectually destroy it.

These suggestions may be nothing new, and perhaps have been put in practice by many, but I cannot conceive of a more effectual process. Too many orchards become prematurely old by neglecting to cultivate among the trees, and manuring well, as you would for a field of corn or a crop of oats. Beside, when the old sward is turned under, how many thousand of the pestiferous insect creatures, such as apple curculio, etc., may be destroyed? Not like the tree in the forest, that is enriched by the dropping of its own leaves, and grows luxuriantly, the old orchard apple trees, for a half century, have stood like the monuments of a grave-yard, only to gather moss and bear no fruit; vigor, life and fruitage come from the plow, the manure heap and the labor of man.

Brooklyn, L. I. H. POOR.

A NORWEGIAN HOME.

The houses in which these country people reside are not altogether unlike the small log-cabins of the early settlers on our western frontier. I have seen many such on the borders of Missouri and Kansas. Built in the most primitive style of pine logs, they stand upon stumps or columns of stone, elevated some two or three feet from the ground, in order to allow a draft of air underneath, which in this humid climate is considered necessary for health. They seldom consist of more than two or three rooms, but make up in number what they lack in size. Thus a single farming establishment often comprises some ten or a dozen little cabins, beside the large barn, which is the nucleus around which they all centre; with smaller cribs for pigs, chickens, etc., and here and there a shed for the cows and sheep, all huddled together among the rocks or open hill-side, without the least apparent regard to direction or architectural effect. The roofs are covered with sod, upon which it is not uncommon to see patches of oats, weeds, moss, flowers, or whatever comes most convenient to form roots and give consistency and strength to this singular overtopping. The object, I suppose, is to prevent the transmission of heat during the severe season of winter.

Approaching some of these hamlets or farming establishments during the summer months, the traveller is frequently at a loss to distinguish their green-sodded roofs from the natural sod of the hill-sides, so that one is liable at any time to plunge into the midst of a settlement before he is aware of its existence. Something of a damp earthy look about them, the weedy or grass covered tops, the logs green and moss-grown, the dripping eaves, the veins of water oozing out of the rocks, give them a peculiarly northern and chilling effect, and fill the mind with visions of long and dreary winters, rheumatisms, colds, coughs and consumptions, to which it is said these people are subject. Nothing so wild and primitive is to be seen in any other part of the day, when the inhabitants are out in the hills attending their flocks or cultivating their small patches of ground. I passed many groups of cabins without seeing the first sign of life, save now and then a few chickens or pigs rooting about the barn-yard. The constant impression was that it was Sunday, or at least a holiday, and that the people were either at church or asleep. For one who seeks retirement from the busy haunts of life, where he can indulge in uninterrupted reflection, I know of no country that can equal Norway. There are places in the interior where I am sure he would be astonished at the sound of his own voice. The deserts of Africa can scarcely present a scene of such utter isolation.—*Harper's Magazine.*

WHAT ARE TREES MADE OF?

If we were to take up a handful of soil and examine it under the microscope, we should probably find it to contain a number of fragments of wood, small broken pieces of branches or leaves, or other parts of the tree. If we could examine it chemically, we should find yet more strikingly that it was nearly the same as wood in its composition. Perhaps, then, it may be said, the young plant obtains its wood from the earth in which it grows. The following experiment will show whether this conjecture is correct or not. Two hundred pounds of earth were dried in an oven, and afterwards put into a large earthen vessel: the earth was then moistened with rain-water, and a willow tree, weighing five pounds, was planted therein. During the space of five years the earth was carefully watered with rain-water. The willow grew and flourished, and to prevent the earth from being mixed with fresh earth, being blown upon it by winds, it was covered with a metal plate full of very minute holes, which would exclude everything but air from getting across the earth below it. After growing in the earth for five years, the tree was removed, and on being weighed was found to have gained one hundred and sixty-four pounds. And this estimate did not include the weight of the leaves or dead branches which in five years fell from the tree.

Now came the application of the test. Was all this obtained from the earth? It had not sensibly diminished; but in order to make the experiment conclusive, it was again dried in an oven and put in the balance. Astonishing was the result—the earth weighed only two ounces less than it did when the willow was first planted in it! yet the tree has gained *one hundred and sixty-four pounds*. Manifestly, then, the wood thus gained in the space of time was *not* obtained from the earth; we are therefore obliged to repeat our question, Where does the wood come from? We are left with only two alternatives, the water with which it was refreshed, or the air in which it lived. It can be clearly shown that it was not due to the water; we are consequently unable to resist the perplexing and wonderful conclusion—it was derived from the *air*.

Can it be? Were those great ocean spaces of wood, which are as old as man's introduction into Eden, and wave in their vast and solitary luxuriance over the fertile hills and plains of South America, were all these obtained from the thin air? Were the particles which unite to form our battle-ships, Old England's walls of wood, ever borne the world about, not only on wings of air, but air themselves? Was the firm table on which I rest, the solid floor on which I dwell, once in a form which I could not as much as lay my finger on, and grasp in my hand? Wonderful truth! all this is air.—*Eng. Paper.*

KEEPING GRAPES.—Dining with a friend recently, we had the unusual luxury of a desert of Catawba and Isabella grapes. Their mode of preservation being the theme, we learned that they were picked when perfectly dry and ripe, and packed carefully in bunches, in a box, between layers of cotton, and as much as possible excluded from the light and air. More recently a gentleman from Pennsylvania tells us that he has seen them successfully preserved till spring, as follows: "Into the bottom of a small keg or nail-cask put a layer of grape leaves fresh from the vines. On these carefully place a layer of sound, ripe, dry grapes, then leaves and grapes in alternate layers, till the keg is full. Head up the cask, and bury it in some well drained ground, below the depth of the frost." Like other things excluded from the light and air, they will change rapidly on exposure, and hence when a keg is opened and they are found good, use them freely.

POULTRY-HOUSES AND YARDS.

ARTHUR YOUNG, whose opinions and inculcations on most matters appertaining to farming and domestic life are of a highly practical character, in some observations upon this subject says:—"When a set of houses are intended for the rearing and feeding of poultry, a situation should be selected near, or close to the farm-yard, and with ample space around for the fowls to disperse over in the day time, and containing one or more ponds for the aquatic birds. All must have access to a gravel-yard, and to grass for range, and to cleanliness, and to white-washing, not for appearance merely, but to destroy the vermin."

Poultry should never be restricted as to food, if we are to expect profit from them. It is more judicious, and will be more for our interest to allow a superfluity, than to stint them in this respect. Loudon observes, in one of his valuable works, that in selecting a site for a poultry-house, one should be chosen which is perfectly dry, and with an exposure to the east, or south-east, in order to secure to the fowls the benefit of the sun's rays during the inclement seasons of spring and autumn. But this, some will say, is a department of rural economy which belongs, or should belong exclusively to the female part of the household. Very well: We have no objection to such an assignment of it, but then the good man must see that the proper shelter is provided, and store of good food supplied for the fowls. The housewife can doubtless do much in this as in various other matters to ensure the success of her husband's labors. In the language of old Father TUSSER, whose "*Five Hundred Points of Good Husbandry*" should be in the hands of most farmers, although published so long ago as the reign of Henry VIII., of England—

> "When husband is absent, the housewife be chief,
> And look to their labor that eateth her beef.
> The housewife so named (of keeping the house,)
> Must tend on her profit, as cat on a mouse."

It is very desirable in rearing poultry for the market—and especially hens—that good varieties be selected, such as will not only lay well, and be watchful and attentive mothers in bringing up their young, but be kindly disposed to fatten when preparing for the market. The Bolton Greys are said by those who have had much experience in

poultry-raising, to excel in the latter respect, while they are exceeded by the Shanghaes and Dorkings in the former. The White Dorkings are beautiful birds. They are of a middling size, entirely white, have partially feathered, yellow legs, and are good layers and mothers. They are a little inconstant in sitting, and inclined to sit too much. Their flesh is juicy, tender and delicious, and comes nearer the common fowls of New England many years ago, than any other we have ever tasted. The *Speckled Dorkings* are also superior fowls, having the broadest bodies according to the whole weight of any fowls we have ever seen. Dr. EBEN WIGHT, of Dedham, who has imported several varieties of fowls—and among them the *Speckled Dorking*—sent us a splendid pair of them last fall, which now promise to be an unequivocal addition to our poultry-yard. The doctor has conferred great pleasure, as well as profit, upon poultry-raisers by his attention and excellent judgment in the introduction of superior breeds of poultry.

The *Brahma Pootra* fowl is highly esteemed by many, and our own experience coincides with this good opinion. Mr. IVES, of Salem, who has had much experience in rearing poultry, gives this breed the highest praise, both for beauty of appearance and profitable products.

"The chicken," says a late writer, "is classed by the naturalist in the tribe of the *Gallinaceæ*, forming part of the order *Rasores* or scraping birds." These fowls swallow their food without mastication, a process which is rendered utterly superfluous by the provision of an apparatus denominated a "*crop*," which bears a very near resemblance to the first stomach of the cow, and in which the food received is speedily macerated, and to a certain extent dissolved or digested by the action of secreted fluids. Below the crop there is a second cavity or sac-like organ, into which the food in its partially macerated state passes, and where it is again subjected to the action of the stomachic, or animal solvent or digestive fluid, and is finally transmitted to the "gizzard," or last stomach, which is furnished with muscular and cartilaginous linings of very considerable strength. Here it is inturated and converted into a thin paste, preparatory to its reception into the chyle-gut, from which it passes finally into the circulation. The muscular force of the gizzard is so great that even glass is in a few hours reduced to powder when submitted to its action, and even the roughest and hardest bodies are not proof against its force. Spallanzani is said to have introduced into the gizzard of a fowl a leaden ball, with a dozen needles so fixed in it that their points protruded a quarter of an inch from the surface in various directions, yet this formidable machine, instead of proving of the slightest injury, was in itself broken down, and the sharp needles demolished entirely, in the brief space of a little more than two hours!

Instinct leads the barn-door fowl to swallow gravel, shells and glass, to facilitate and hasten the comminution of the food it partakes of, whether animal or vegetable. While having the free range of the fields, a very considerable proportion of the food of most fowls is derived from the insect tribes. This fact suggests the importance of supplying them liberally with meat, when confined to the hen-house. A hen restricted exclusively to a vegetable diet, no matter how liberal may be the hand that feeds her, will be far less profitable than one fed on a mixed diet of meat and vegetables.

For the New England Farmer.

FENCES.

So much has been said of late in the *Farmer* about fences, that the subject may seem almost exhausted, yet as this is one of the most important items connected with the business of farming, it may not be unprofitable to your agricultural readers to have their attention called to it once more.

Farming, without fences, is of course an impossibility. Good farming, with poor fences, is equally so. With poor fences, a man may not expect to have peaceable cattle or good neighbors, nor can he feel any security for his crops, as they are hourly exposed to destruction. Under such circumstances, (which are by no means unfrequent,) is it strange that farming is regarded as the most vexatious and uninviting of all employments? If, then, good fences are one of the essentials of farming, of course the question at once arises—what kind of fence is the most profitable to build?

Mr. I. Palmer, of South Hampton, N. H., has mentioned in your paper several varieties which he regards as good, and which are, without doubt, a great improvement on many kinds now in use; but there is a kind of fence coming into use in this vicinity, which, in my opinion, is far superior to any which Mr. P. has mentioned. I refer to that known as Smith's patent, a description of which has recently been given in the *Farmer*. I lived for several years near Mr. Smith, and have seen his fence thoroughly tested in a variety of ways. It works equally well on swampy, clayey or ledgy land, and fully comes up to any recommendation which has been given of it.

Mr. Palmer inquires how the braces are to be tied to the boulders? This is easily done by means of looped wire, or pieces of iron set in brimstone, which, if properly done, are perfectly immovable. I built some of this fence around my barnyard last year, which, to keep off the storms, I made tight and high, and it stands now just as firm as though the posts were frozen into the ground. As for its durability, it is difficult to tell what part of it will fail first. If any of your readers have occasion to pass through Haverhill, N. H., tell them to call on Mr. Smith and examine for themselves, and if they have heretofore been skeptical on the subject, they will be likely to be so no longer, for "seeing will be believing."

Many of the best farmers in this vicinity, who are not usually hasty to adopt new notions, have become satisfied in regard to this fence, and are preparing to build it on their own farms. Undoubtedly, it will eventually come into general use, and if so, depend upon it, the country will become richer thereby. I. B. AYER.

Bradford, Vt., July, 1862.

REMARKS.—If any one wishes to see the fence our correspondent so greatly commends, he can find it on our farm at Concord, Mass., where some fifty rods are set. The fence rests entirely upon stones, not a particle of it touching the ground. We expect to be able to give the exact cost per rod, as it stands.

THE FLIGHT OF BIRDS.

The nephew of Dr. Jenner, when on board a vessel going in a direct course for Newfoundland, and more than one hundred leagues from any land, saw a brown owl gliding over the ocean with as much apparent ease as when seeking for a mouse over its own native fields. Mr. William Thompson, of Belfast, in his Natural History of Ireland, records, vol. I., page 102, from the log book kept on board the *John and Robert*, of five hundred tons, Captain M'Kechnie, from Quebec to the port of Belfast, that from thirty to forty snowy owls, on the 16th of November, 1838, were seen when the vessel was 250 miles from the Straits of Belleisle. Several followed the ship; from fifty to sixty were seen on the 18th, some alighting on the rigging and yards; three were caught and taken to Belfast alive. The last of those seen at sea was on the 20th of November; the vessel then near 700 miles from Belleisle, and sailing along in latitude 54, or nearly so. The Rev. Robert Holdsworth wrote me word that a water-rail alighted on the arm of a man-of war, about 500 miles to the westward of Cape Clear, and at the same distance from any known land. An officer of the ship caught it, and carried it with him to Lisbon, feeding it with bits of raw meat. In a day or two it became perfectly tame, and would eat out of his hand. By the kindness of two officers of the Royal 42d Highlanders, stationed at Bermuda, I received the skin of a land-rail shot there. This bird is not found in the New World, and could only have reached Bermuda under the influence of a strong northeast wind and thus saved its life, for a time, by making that island. With respect to Sir Ross's pigeons, as far as I can recollect, he dispatched a young pair on the 6th or 7th of October, 1850, from Assistant Bay, a little to the west of Wellington Sound, and on the 13th of October, a pigeon made its appearance at the dovecot in Ayrshire, from whence Sir John had the two pairs of pigeons which he took out. The distance between the two places is about 2000 miles. The dovecot was under repair at this time, and the pigeons belonging to it had been removed; but the servants of the house were struck with the appearance and motions of this stranger. After a short stay, it went to a pigeon-house of a neighboring proprietor, where it was caught and sent back to the lady who originally owned it. She at once recognized it as one of those she had given to Sir John Ross, but to put the matter to a test, it was carried into the pigeon-house, when, out of many niches, it went directly to the one in which it had been hatched. No doubt remained in the mind of the lady as to the identity of the bird.—*Yarrell's Birds.*

SCIENTIFIC MODE OF BOILING MEAT.

When animals are newly killed, there is an acid secretion in their flesh which turns blue litmus paper red, and which renders their flesh easy of digestion, if it be eaten immediately. In a few hours, however, this acid evaporates, and the meat becomes hard and difficult of digestion, till it has been softened by cookery, or kept sufficiently long to have become tender, from the process of decomposition having commenced. In Liebig's recently published work on the "Chemistry of Human Food," we are told that boiling flesh slowly, effects a chemical change in its composition; and, according to the length of time employed in boiling, and the amount of water used, there takes place a more or less perfect separation of the soluble from the insoluble constituents of flesh: the water, or soup, in which the flesh has been boiled, containing the soluble matter, and the *bouilli* or meat from which the soup was made, consisting chiefly of fibrous, insoluble matter, nearly useless as nourishing food. Thus it is obvious that when the water in which the meat has been boiled slowly is thrown away, by far the greater part of the soluble or nutritious matter is wasted. A very different mode of cooking should be adopted when it is wished to eat the meat. The muscular fibre of flesh in its natural state is everywhere surrounded by a liquid containing dissolved albumen. When this is removed by boiling with water, the muscular fibre becomes hard and horny, and this hardness increases the longer it is boiled. "It is obvious, therefore," observes Liebig, "that the tenderness of boiled meat depends upon the quantity of albumen deposited between the fibres, and there coagulating; for the contraction or hardening of the fibres is thereby, to a certain extent, prevented. If the flesh intended to be eaten, be introduced into the boiler when the water is in a state of brisk ebullition, and if the boiling be kept up for some minutes, and then so much cold water added as to reduce the temperature of the water to 158°, the whole being kept at this temperature for some hours, all the conditions are united which give to the flesh the qualities best adapted to its use as food. When it is introduced into the boiling water, the albumen immediately coagulates from the surface inwards, and in this state forms a crust or shell, which no longer permits the external water to penetrate into the interior of the mass of flesh. But the temperature is gradually transmitted to the interior, and there effects the conversion of the raw flesh into the state of boiled meat. The flesh retains its juiciness, and is quite as agreeable to the taste as it can be made by roasting; for the chief part of the sapid constituents of the mass is retained, under these circumstance, in the flesh."

A GOOD IDEA.—That is a good idea of Clark's: "The *frost* is God's *plow*, which he drives through every inch of ground in the world, opening each clod and pulverizing the whole."

LATE PASTURING.

Some farmers keep their cattle out as late as possible in the fall, and even into winter. The pastures are gnawed very close, and even the after-math of mowing fields, as if they never expected to get another crop of grass from them. This is very bad husbandry upon any land, and especially upon that recently seeded with herds-grass. This grass, as is well known to all careful observers, has a bulbous root, and the fine roots that shoot out from the bottom are not as strong as the roots of most other grasses. It is, therefore exceedingly liable to be torn out by the roots by grazing cattle, especially if the grass is short. In a close cropped meadow where this grass has been sown, nothing is more common than to see thousands of these dried bulbs lying upon the surface. We doubt the economy of grazing a herds-grass meadow at any time. But if done at all, it should not be cropped after the first of November in this latitude.

The roots of all the grasses are designed to be covered with their own leaves and stalks during the winter. These, and the snow, protect them from the alternate freezings and thawings, and bring them out in good condition in the spring. The farmer who undertakes to thwart the designs of Nature in this respect, will find it a very expensive business. The little that he saves in feed now, he loses next season in the diminished yield of the pasture or the meadow. We ought always to manage so as to have Nature working with us, instead of against us. This is one of the evils of overstocking farms. The farmer is afraid that he has not quite fodder enough for winter, so he pastures till the ground is frozen. He cuts less hay for the next season, and he is still more sorely tempted to pasture.

It is quite as bad for the cattle as it is for the land. If they have no fodder in the month of November, they lose, rather than gain upon pasture, unless it is much better than the average. Every animal ought to go into the stable in a thriving condition—if not fat, at least in full flesh. They are then easily kept thriving upon good hay, or upon hay and roots, straw and meal. After several years' close observation directed to this particular point, we do not think any thing is gained by pasturing in this latitude, and north of it, after the first of this month. All the grasses must have time to cover their roots in order to make flush feed next season. Cattle foddered through a part of October, and brought to the stable about the first of November, in good flesh, are easily wintered. It is better management to buy hay or to sell stock, than to pinch the pastures by close feeding.—*American Agriculturist.*

SIMPLE RECEIPTS FOR MAKING VINEGAR.—T. B. Miller, of Clayton, Ind., has communicated to the New York Farmers' Club the following simple receipts for making vinegar:

"Fill nearly full any vessel, jug, crock, pan, tub or barrel with pure rain or soft water, sweeten it with any kind of molasses, (the quantity is not material,) set it in a moderately warm place, or in the sun, cover with sieve, gauze or net, to kep out flies and gnats. In due process of time it will be vinegar, when it must be put into a suitable vessel and stopped close. To convert cider into vinegar—if made from sweet apples, it is only necessary to set the barrel in a warm place and knock out the bung; if from sour, stir in a little molasses, and when sour enough bung up tight. Vinegar barrels should be well painted, as they are liable to be eaten by worms.

It will be proper to state that it is the action of the atmosphere, which in time converts the sweetened water into vinegar, hence the greater the surface of water exposed to its influence the sooner it will sour. There is a thick scum rises on the top of the vinegar when making, which is the 'mother,' and should not be thrown away."

A WOODLAND SONG.

From north and south, and east and west,
A sound of joy is coming;
The patridge, in his russet vest,
Down in the glen is drumming;
The squirrel and the cedar bird,
And the woodpecker, all are merry,
And I, too, sing, as I flirt my wing,
Chick-a-dee-dee-down-derry!

Because, no more, for walls of wood,
The nations now will ravage,
With ringing axe, the solitude,
So dear to bird and savage;
Since iron, only, on the sea,
Henceforth, the day will carry;
Then sing, old passenger, with me,
Chick-a-dee-dee-down-derry!

Live on, live oak, on ridge and glade,
Unfearful of disaster;
Pine tree, that erst a mast had made,
Of you I now am master;
Bend, beech, unto the linden tree,
Young ash, embrace the cherry,
And sing, old beeswax, sing with me,
Chick-a-dee-dee-down-derry! *Vanity Fair.*

LIME IN AGRICULTURE.

In a paper lately read by Boussingault, before the Paris Academy of Sciences, he stated that lime introduced in an arable soil, very quickly sets at liberty a certain quantity of azote in the state of ammonia: the azote elements were before united in insoluble combinations, not assimilable by plants—the action of the lime sets them free, and permits a part of the capital buried in the soil to be utilized for the next crop. Boussingault thinks that certain mineral matters, such as potash and silica, may be liberated in the soil by the lime; that other substances injurious to plants are destroyed or modified by the same agent, and that to these effects is added besides, a physical action, changing the constitution of the land. The action of the lime is thus excessively complex, and its good effects can only be explained by studying attentively the special circumstances under which they are produced. The grand fact proved by the present researches of Boussingault is, that there exists in mold, as well in the form of organic matters as in that of mineral matters, a host of substances completely inert for vegetation, until the moment when some proper agent renders them assimilable by plants. The continuance of experiments can alone clear up these complex facts, and point out to our agriculturists the most effective processes.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 20.

KINGLETS---TITMICE.

Ruby-crested Kinglet---Golden-crested Kinglet---Crested Titmouse---Black-capped Titmouse---Hudson's Bay Titmouse.

In the genus *Regulus* we find a few species of very minute and interesting birds, two of which visit New England, and are widely distributed over North America. They are hardy, extremely active birds, and perform extensive migrations, though one species is sometimes found here in the depth of winter. Their color is generally some plain tint of olive, with an erectable crest of brightly-colored feathers.

The RUBY-CRESTED KINGLET, (*Regulus Calendula*, Licht.,) winters in Mexico, and some of the Southern States, and reaches Massachusetts in April, first appearing among the maple blossoms, nimbly searching among the opening buds for a small black beetle on which it feeds much, and other insects and larvæ. For about two weeks it is not uncommon in our woods and swamps, busily hunting its food among the evergreens, and the yet almost naked twigs of the deciduous trees, searching the tops of the tallest trees, where they seem but little larger than Humming Birds, as well as the low bushes. At this time the males possess a low but very agreeable warbling song, frequently uttered during the clear, fine mornings of the last of April and the first week of May; and at this early season, their song can only be listened to with great pleasure, seeming the more sweet, heard amid the desolate and leafless woods. When several males meet, they erect their brilliant crests, which are then conspicuous, and go through a variety of odd and curious gesticulations, their little throats swelling and quivering as each tries to excel the others in song. As soon as the season has a little advanced, they leave for more boreal regions, where they spend the summer rearing their young, and are not again seen till October, when they return to the South. A few sometimes pass the summer among the mountains of the Middle States, but their breeding habits seem to be yet unknown. In the fall they are more numerous, and occasionally visit the orchards; a few often linger till late in November. This bird is perhaps better known as the *Ruby-crowned Wren.*

Length four and a half inches; breadth of wings six and a half. Above, dark green olive, with a tinge of yellow; beneath, yellowish white; an oblong patch of erectable, scarlet feathers on the crown, which usually lie concealed by other feathers.

The GOLDEN-CRESTED KINGLET, (*Regulus satrapa*, Licht.,) is found throughout the northern parts of the United States, westward to the Rocky Mountains, but is more circumscribed in its habitat than the preceding, which appears to visit nearly all parts of the continent. In its habits, as well as in its general colors, it greatly resembles the preceding species, spending the summer to the northward, and appearing here in spring and autumn, and is equally active and expert in finding and capturing its prey. In fall they are sometimes quite numerous, frequenting the orchards and feasting upon the insects that then infest the leaves of the apple trees, as well as hunting in the woodlands. They occasionally associate with the Ruby-crested species, but are more frequently found in company with the Chickadees, Nuthatches and Brown Creepers, often forming a noisy party of several dozens. They usually forage at this season in small parties of four or five to a dozen or more, are very unsuspicious and industrious, searching the extremities of the twigs, the branches and the bark of the trunks with great care for the lurking larvæ. Their only note at this season seems to be a feeble, plaintive *schreep*, which is their call-note. Although but half the size of the Chickadee, they sometimes pass the winter in this State, when they are almost invariably found in company with the Chickadee, which they greatly surpass in the activity and agility with which they hunt the almost barren twigs for food. I have seen them in January, within twenty-four hours after the thermometer had shown a temperature ten or twelve degrees below zero, appearing as active and comfortable as ever.

The length of this species is four inches, stretch of wings six and a half. Above, olive green; underparts, dull white; a line of white over each eye, above which is a line of deep black on each side of the head; between these black lines is an oblong spot of brilliant golden yellow, divided by a narrower spot of vivid flame color. These colors contrast admirably, and often form a conspicuous ornament as the bird is flitting among the trees. The female has the colors of the crest much paler.

This species much resembles the common Gold-Crest, or Golden-Crowned Wren, of Europe, and has been described as identical with it, as *Regulus cristalus*, though decidedly distinct.

Audubon described another American species of *Regulus*, (*Regulus Cuviere*,) dedicating it to Cuvier, but the only specimen yet known is the one shot by him in Pennsylvania on the Schuylkill, in June, 1812, on which the species rests.

The sub-family *Parinæ*, (the *Titmice*) comprise a group of very useful and interesting birds, being chiefly insectivorous, of which the common Chickadee may be taken as an example. In the ninth volume of the reports on the various Pacific Railroad expeditions and surveys, sixteen species are described by Prof. Baird as found in the United States, of which but two or three are found in New England, a great part of them having a western or southern habitat, several residing wholly west of the Rocky Mountains, and others are confined to the valleys of Texas and Mexico, and southward.

The CRESTED TITMOUSE, (*Lophophanes bicolor*, Bonap.; *Parus bicolor* of earlier writers,) is occasionally seen in New York, and though its habitat is said to be the whole of eastern North America, it is extremely rare in Massachusetts, and southern New England generally, and there are but few authentic instances of its having been taken here. It is described by Wilson as "more noisy than the common Chickadee, more musical and more suspicious, though rather less active. It is, nevertheless, a sprightly bird, possessing a remarkable variety in the tones of its voice, at one time not much louder than the squeaking of a mouse, and a moment after whistling aloud and clearly, as if calling a dog; and continuing this dog-call through the woods for half an hour at a time. Its high, pointed crest, or, as Pennant calls it, *toupet*, gives it a smart and not inelegant ap-

pearance." Their food consists of insects and their larvæ, chiefly the latter during winter, with the addition of a few seeds. It builds its nest in a hollow tree, which it often excavates itself, and the female lays six eggs, pure white, with a few reddish specks at the larger end. It extends its migrations far to the north, inhabiting Greenland, and is occasionally met with in the north of Europe.

Length six inches; alar extent, seven and a half. Above, ashy black; forehead nearly black; beneath, whitish; sides. chestnut. Head with a high pointed crest.

The BLACK-CAPPED TITMOUSE, or CHICKADEE, (*Parus atricapillus*, Linn.,) is the most common species of this group of birds found in New England, and is universally known as a familiar, noisy, very active and restless bird, and is a constant resident, braving our severest winters, and is said to be even abundant in the depth of winter as far north as Hudson's Bay. It is universally esteemed as a friend, and for the best of reasons, being a great consumer of a large variety of injurious insects, often making excursions to the orchard and shrubbery of the gardens, in fall and winter, from the woods where it resides the greater part of the year. In the coldest weather they will make the woods echo with their varied notes, as in company with Woodpeckers, Creepers and Nuthatches, they hunt the twigs, the larger branches and the bark of the trunk for dormant insects and larvæ, each in his peculiar way. In winter they feed upon the seeds of the hemlock and pine, and sometimes come about the farmer's door for crumbs to vary their scanty fare at this inclement season. Their agility is surpassed by but few birds, and when searching for food will cling head and back downwards in every possible attitude. They usually forage in small parties, and keep up a constant twitter of varied notes. They nest in hollow trees, the female sometimes making the excavation herself. The eggs are six, white, with a few minute specks of red. During the latter part of the summer the whole family hunt together, the parents guiding and feeding the brood, keeping up a constant chatter.

Length five inches and a half; alar extent, six and a half. Back, ashy brown; head and throat, black with a white patch between them; beneath, whitish, sides brownish. The thick covering of long, soft, downy feathers is admirably adapted to protect this bird from the severe cold of winter.

Another species of Titmouse, generally regarded as a bird of New England, is the HUDSON'S BAY TITMOUSE, (*Parus Hudsonicus*, Forster,) as the southern limit of its habitat is known to be within the Northern States, inhabiting from Massachusetts northward throughout eastern North America. In habits it differs but little from those already described, breeding in hollow stumps and trees, though in color more nearly resembling the Chestnut back Titmouse, (*P. rufescens*,) of the Pacific coast. J. A. A.

Springfield, July, 1862.

OX-BOT.—This is a cuticular insect, the egg being deposited externally in the skin of cattle, and the larvæ inhabiting a tumor or abscess formed around them. These tumors are usually found in the back or loins, and are often larger than a pigeon's egg. When the fly is depositing its egg the cattle are in the extremest agitation and dismay, and sometimes become quite furious, running off, bellowing, at full speed. The larvæ in its cyst gradually enlarges, while the pus that is secreted by the irritation serves for its nourishment. The tumors which are produced are called *warbles, wormals* or *womils*. The skin and hide are permanently injured by being subjected to this process.—*Ohio Valley Farmer*.

MANURES.

Next to a systematic and energetic application of the powers of both mind and body to his profession, the *collection, preparation* and *application* of manure to the soil is of importance to the farmer. On New England soils, these must supply the basis of all profitable culture, and collected in suitable quantity, skilfully prepared and judiciously applied, they will certainly lead to thrift and independence. These will follow, even in this cold and variable climate, and on any of our lands that are managed by an intelligent industry.

The difficulty presented to the farmer in this matter, is *the want* of the materials themselves to swell his heaps. He naturally argues that he has so much hay, which, when fed out, will produce about so much manure, and in thousands of cases, little effort is made to change this state of things. Evidently, the first step towards improvement must be to change this condition by increasing the materials that are to increase our crops. This cannot be done without an outlay of labor, and it is this item of cost that deters so many persons from securing the necessary materials for large and valuable heaps of manure. This is an important omission, because this work forms the basis of all the future operations of the farmer, and absolutely prevents that progress and profit which would certainly flow from a more intelligent practice.

All farms furnish resources for these supplies, in a greater or less degree. On some there are leaves and ferns; on others head lands and balks, where the finest portions of the soil have been accumulating for a generation, in unsightly and inconvenient quantity — another has sea-weed thrown upon its margin or shells of various kinds that may be converted into rich materials; while some of them have marl, and a large proportion ample beds of meadow or swamp muck. There are various other resources, also, beside these and the usual products of the fodder crops, of which the farmer should avail himself, such as the waste of every kind from the house, hassocks from the meadows, small brush, tan bark, sawdust, shavings, &c., all of which are valuable materials when properly wrought up and tempered with lime, salt and ashes, or some other quickening agent. No labor on the farm can be more profitably expend-

ed than that devoted to this work, although a too common practice will scarcely verify our statement. Too little capital, either of labor or money, invested in this primary part of farm management, embarrasses all the succeeding operations of the farmer, and causes a great amount of labor to be performed that brings no productive results. It is as though the manufacturer should erect his mill, and supply the necessary material of cotton and wool, but provide no power to propel his machinery.

THE IDEA OF THE SPINNING-JENNY.

Suddenly he (James Hargreaves) dropped on his knees and rolled on the stone floor at full length. He lay with his face toward the floor, and made lines and circles with the end of a burned stick. He rose, and went to the fire to burn his stick. He took hold of his bristly hair with one hand and rubbed his forehead and nose with the other and the blackened stick. Then he sat upon a chair, and placed his head between his hands, elbows on his knees, and gazed intently on the floor. Then he sprang to his feet, and replied to some feeble question of his wife, (who had not risen since the day she gave birth to a little stranger,) by a loud assurance that he had it; and, taking her in his sturdy arms, in the blankets, the baby in her arms, he lifted her out, and held her over the black drawings on the floor. These he explained, and she joined a small, hopeful, happy laugh with his high-toned assurance, that she should never again toil at the spinning-wheel—that he should never again "play," and have his loom standing for want of weft. She asked some questions, which he answered, after seating her in the arm-chair, by laying her spinning-wheel on its back, the horizontal spindle standing vertically, while he made the wheel revolve, and drew a roving of cotton from the spindle, into an attenuated thread. "Our fortune is made, when that is made," he said, speaking of his drawings on the floor. "What will you call it?" asked his wife. "Call it? What an we call it after thysen, Jenny? They called thee 'Spinning Jenny,' afore I had thee, because thou beat every lass in Stanehill Moor at the wheel. What if we call it 'Spinning Jenny?'"

THE DRAFT AND THE FARMERS.—The Chicago *Times* thinks the order for drafting comes very opportunely, so far as the farmers are concerned. By the time operations will have fairly commenced under it, the harvests will have been generally secured, and farmers will have an interval of a couple of months before it will be necessary to sow the fall wheat. If they are economical in time and means there need be but little if any diminution in the amount of land sown. Calculating the time for the 300,000 men called for nine months to begin on the first of September, they will be entitled to discharge on the first of May, which will enable them to return home in time to assist in putting in the spring crops. It would seem as if this had been considered in making the call, as under it we may hope there will be no material lessening of the agricultural products of the country in either the present or coming year.

THE BEAUTY OF THE GRASS.

It seems as if nothing could be said under this head, because, in truth, there is so much to say. To get a good idea of the beauty of the grass, endeavor, in imagination, to form a picture of a world without it. It is precisely to the scenery of nature, what the Bible is to literature. Do you remember that idea of Froude's, that the Bible had been obliterated, and every other book had thereat lost its value, and literature was at an end? Take away this green ground color on which Dame Nature works her embroidery patterns, and where would be the picturesque scarlet poppies or white daisies, or the gray of chalk cliffs, or the golden bloom of a wilderness of buttercups? Its chief service to beauty is as the garment of the earth. It watches night and day at all seasons of the year, "in all places that the eye of heaven visits," for spots on which to pitch new tents, to make the desert less hideous, fill up the ground work of the grandest pictures, and give the promise of plenty on the flowery meadows where it lifts its silvery and purple panicles breast high, and mocks the sea in its rolling waves of sparkling greenness. It is beautiful when it mixes with *oupine* and *turritis* on ruined bastion or gray garden wall; beautiful when it sprinkles the brown thatch with tufts that find sufficient nourishment where green mosses have been before; beautiful when it clothes the harsh upland, and gives nourishment to a thousand snow-white fleeces; still more beautiful when it makes a little islet in a bright blue mountain lake, "a fortunate purple isle," with its ruddy spikes of short-lived flowers; and precious as well as beautiful when it comes close beside us, in company with the sparrow and robin, as a threshold visitant, to soften the footfall of care, and give a daily welcome to the world of greenness.

> "If a friend my grass-grown threshold find,
> O, how my lonely cot resounds with glee."

Is it only for its velvet softness, and the round pillowy knoll it heaves up in the vistas of the greenwood, that the weary and the dreamer find it so sweet a place of rest? Or is it because the wild bee flits around its silvery panicles, and blows his bugle as he goes with a bounding heart to gather sweets; that the hare and rabbit burrow beneath its smooth sward; that the dear lark cowers amid its sprays, and cherishes the children of its bosom under its brown, matted roots; that the daisy, the cowslip, the daffodil, the orchises—the fairies of the flower-world—the bird's foot trefoil—the golden-fingered beauty of the meadows, the little yellow and the large strawberry trefoil, are all sheltered and cherished by it; and that one of its simple children, the *Anthoxantum odoratum*, or sweet-scented vernal grass, scents the air for miles with the sweetest perfume ever breathed by man?

AN OX OR COW that is accustomed to throwing fences, may be prevented doing so by taking a large wire and bending it in the shape of a bow; then bend the points in the shape of a fish-hook; tie two strings to the wire, place the hooks in the nostrils lightly, and tie one string to the point of each horn. This will prevent the most unruly ox or cow from throwing fences.

For the New England Farmer.

AGRICULTURE.

Agriculture was the first occupation of man. Many of the most distinguished men, in every age of the world, have been cultivators of the soil. They thought it no dishonor to obey the Divine injunction, and earn their daily bread by the sweat of their brow. Some of the ancient nations esteemed agriculture as the most honorable of pursuits. Indeed, it is the foundation of all other pursuits. Were it not for the produce of the soil, there would be no commerce, no intercourse between nations, ships would rot at their docks, merchants would have to leave their counting rooms, and the whole human family would soon experience a day as dark as the one Lord Byron's imagination saw.

Agriculture spreads the table from which we obtain nourishment, to strengthen these weak and decaying bodies. The manufacturer cannot flourish, without the aid of the farmer. Every new wheel which is set in motion depends upon the farmer for the raw material to manufacture into cloth. Where the cultivation of the soil is held in low estimation, we see no thriving cities, no centres of commerce or trade, no railroads or telegraphs, no civilized society; nothing but a low, degraded race of barbarians. No nation can be prosperous and wealthy, without the development of its agricultural resources. The agricultural classes are the sovereigns of our country, and will control its political destinies in future ages.

How many young men we see, who act as though they thought it beneath their dignity to till the soil and earn their daily bread! They seem to think that everlasting disgrace would come upon them, if they should be seen hold of the plow or the hoe! So they look with scorn upon the farmer's lot, and die in the poor-house. How many people there are, who think that the ignorant ought to cultivate the soil, and the more learned follow other pursuits. It is a great mistake. Agriculture is a science; and ought to be studied just as much as any other science, if we wish to be successful farmers. A few more brains with the muscles, would improve the soil very much.

Some complain that it is unpleasant work to cultivate the soil. I do not agree with that class of persons. I delight, with a good team and plow, on a beautiful spring morning, when the merry birds sing sweetly upon the sunny hill-sides, and all Nature seems alive with music, to go forth into the field, and turn the furrows over, and view Nature in her most beautiful aspect. The surrounding scenery points me upward to Nature's God, and fills my heart with gratitude and praise to the Giver of every good and perfect gift. There is no class of people in the world who enjoy life so well as independent farmers. The man who owns the land which he cultivates, (perhaps it has cost him many years of hard labor, or it may be it is the old homestead, where his father lived before him, and his heart is bound to it by a thousand sacred ties,) is truly in a position to enjoy life's sweetest blessings. OLIVER P. MEAD.

Middlebury, Vt., 1862.

THE violet grows low, and covers itself with its own tears, and of all flowers yields the sweetest fragrance. Such is humility.

THE ELM TREE WORMS.

A successful mode of eradicating these pests would seem to have been discovered in Connecticut. A few years since, New Haven, very properly designated "the Elm City," bid fair to lose its right to the cognomen, by the total destruction of its elms, so completely were they overrun and stripped annually by the worms. The authorities, however, very wisely took under their charge all the trees, whether before private property or in the public parks and grounds, and commenced a uniform plan for their protection. Around each tree was placed a bandage of fine straw, so arranged as to present a bristling barrier to the upward march of the worms; above this a leaden trough was placed, surrounding the tree, which was filled with oil and furnished with a projecting roof of the same metal. If any of the worms succeeded in surmounting the barrier of straw, they were caught in the oil, and care was taken to have all so caught regularly taken out and killed, so as to leave the trap clear. The effect of these precautionary measures seems to have been to eradicate the worms almost entirely, and the noble elms of New Haven never appeared to better advantage than at the present time.

YANKEE INVENTIONS ABROAD. — The London *Times* thus notices a few of the machines in the American Court of the Great Exhibition:—

After the models and gigantic engines in the Western Annexe, the very ingenious small hand-labor saving machines in the American Court are the most looked after. One of the most curious of these is the machine for milking the four teats of a cow at the same time, and in a manner precisely similar to the action of the calf's mouth upon the teat. In point of time, labor and cleanliness, the operation of the machine is said to far surpass milking by hand; and the right to use the patent in this country was yesterday sold, we believe for a very large sum. In this court also is a very ingenious machine for making paper bags, which turns them out folded, packed, dried, and finished at the rate of forty a minute. The cork-cutting, "planting," and rope making machines here are especially worthy of minute examination, and some of the washing machines are quite marvels of inventive skill—almost approaching to the inspirations of genius in the simple means by which their great results are effected. This court is worthy of even a more extended notice than it has yet received from the mass of visitors.

FLANNEL.—Flannel should be worn summer and winter, during the day, but should be taken off at night. In summer it allows the perspiration to pass off without condensing upon the skin, and prevents the evil effects of the rapid changes of temperature to which we are liable in our changeable climate, when out of doors. In winter, as a non-conductor of heat, it is a protection against cold. At night, the flannel jacket or jersey should be exposed to a free current of air and allowed thoroughly to dry; it should never be put in a heap of clothes by the bedside. Flannel is usually only worn over the chest and abdomen.

For the New England Farmer.

THE BREAD AND BUTTER MACHINE.

BY MRS. MADELINE LESLIE.

"It has come, mother! It's come, Etty! The machine has come! The express man is taking it out of his wagon, hurrah! Now we'll have some bread in a trice!" and the excited boy swung his cap in the air as he bounded down the steps.

Excuse me, dear reader, for introducing the respectable family of Mr. James Franklin Allen in such an unceremonious manner; but, really, to the parties concerned, the occasion was a most exciting one, which must be my apology.

Now that the machine has been safely deposited on the kitchen table, and the express man, having received his pay, has turned his weary horses from the door, allow me to explain that the aforenamed Mr. Allen was what may be called a merchant-farmer; that is, he made money easily at his store in the city, and spent it laboriously on a few acres of land, which he was trying to rescue from the imputation of having run out. Certain it was, that whatever else did not grow on the farm, the yield of sorrel was very abundant, enough to furnish cures for all the sore throats in the State. Mr. Allen, however, was a man who, having put his hand to the plow, did not look back. Not he. The third year a peat meadow was added to his acres, the mud from which he was well assured would assimilate with his gravelly soil, and thus produce rich bottom land. In a few years his predictions began to be verified. He now added the *Ploughman* and the *New England Farmer* to his list of periodicals, read with interest notices of all the county and State fairs, and even aspired to some of the best premiums.

Noticing one day an advertisement of the prize offered for the best bread at the coming fair, he instantly determined that his daughter Etta should contest it with her neighbors, from flour made of his own wheat. To stimulate her ambition still further, he offered an additional premium of ten dollars, if she would win the silver cup from all competitors.

From this time forth there was a vigorous collection of receipts for making yeast and mixing bread, the excitement reaching its culminating point when, one evening, Mr. Allen returned from the city with the news of a bread and butter machine, the latest production of the genius of our American inventor, THOMAS BLANCHARD, Esq., of Boston. After the announcement of this new aid to her plans, it could not, of course, be expected that Miss Etta would give herself or her father a moment's rest until he had promised to purchase one immediately for her use.

The arrival of this wonderful machine was, therefore, the occasion of Master Walter's excitement at the commencement of this story. In justice to its merits, it ought to be described without further preamble.

On tearing off the coarse matting which enveloped it, a small tub was found, fastened by a large iron pin into an iron stand by means of a groove, in which it turned with great ease. The stand could be fastened by wooden screws upon any table, and thus rendered firm for the work of kneading. Running up from one end of the stand or supporter, to the tub, was a bar of iron into which a lever was attached, which was the propelling power for the business. About midway of the lever was a wooden, concave shovel just fitting to the size of the tub, which, when worked horizontally by the lever, carried the dough from one side of the vessel to the other, mixing, kneading and making into loaves ready for the pans. If it was more convenient to allow the bread to rise without moving it from the tub, the lever was raised and turned back out of the way, and the dough left without any waste of materials, ready, when risen, for the second and third kneading.

Having heard her father's explanation, Etta was all eagerness to give her machine a trial. Putting on a large apron, therefore, she ran to sift her flour, measured it and poured it into the new tub, which her mother had carefully cleansed; then adding her light, frothy yeast and lukewarm water, she proceeded to work the lever to mix the dough, the entire family standing around to watch the experiment.

"Shove it back and forth," said her father, "in this manner; you are not ready for the kneading, yet."

"You will need more flour," suggested the experienced mother. "It is a good rule to mix in flour until it has done sticking."

"O, see how nicely the shovel clears it from the sides of the tub!" cried the laughing girl. "I'm sure, for one, I thank Mr. Blanchard. It *does* work beautifully!"

"Yes, it is a complete success," remarked the merchant-farmer, "and if not so remarkable as his machine for turning marble or plaster busts, or his patent for making gun-stocks, yet I prophesy that Mr. Blanchard's name will long be remembered in connection with his bread and butter machine."

"Can it churn, too, father?" cried Walter, his eyes growing large with astonishment.

"No, not churn, my boy, but you can see by the motion of your sister in making the bread, that the butter when churned, could be thoroughly worked or separated from the milk, by pressing it up against the sides. You, or any one, could do that under the direction of your mother."

Walter gave a scream of joy. "Can you churn to-day, mother?" he asked.

"No, not to-day. We must not disturb Etty's bread till it is ready for the oven. Now, turn it over, Etty, and leave the top smooth."

"I feel quite sure that I shall win the prize," exclaimed the young girl, gazing with evident pride at the nice, white, well-mixed dough in the tub; "and only see, not even a dust of flour on my hands."

"But mother threw in the flour from the scoop, for you," cried Walter.

"Yes, but another day I could do it quite as well, myself. I can't expect to have such an admiring audience every time I mix bread."

"Here is another convenience," said Mr. Allen, smilingly untying a paper bundle which he had quietly withdrawn from their notice. He held up a flat, round piece of hard wood, which he assured them fitted exactly into the bottom of the tub, and then a sharp knife which could be fastened to the wooden shovel, thus acting as an extensive cutter for mince-meat or sausages.

"Well, really, now, Miss Allen!" exclaimed Hannah, the girl of all work, who had been gazing at the group and reflecting in amazement at the

progress of art, "I do believe the millennium day *is* a-coming! Don't the Bible say knowledge will be a-running to and fro through the earth, and hasn't it run out to our farm in the shape of a bread and butter and sausage machine? It *does* seem to my mind that we oughter be setting our houses in order, when the work it took our mothers, hours to accomplish, is done without hands. I'm free to say, ma'am, it makes me solemn."

At tea, the family had an opportunity to test the excellence of the new bread, which, without a dissenting voice, was pronounced "first-rate."

Walter, in his zeal, went so far as to shout, "Hurrah for the bread made without hands!" but instantly blushed crimson on receiving a gentle reproof from his father.

"What a blessing," remarked Mrs. Allen, "this invention will prove in large boarding-houses, where a third of a barrel of flour is mixed at once."

"Yes," replied her husband, "a lady told me today, in the city, that she not only made bread in hers, but gingerbread and fruit-cake, putting together all the ingredients, and giving the whole a thorough beating with little comparative labor."

"I shall want to carry my machine to the fair," cried Etty.

"Mr. Blanchard will probably send one, not only to our county, but to others through the State," rejoined Mr. Allen, "and I have no doubt they will excite great interest wherever they are seen."

REMARKS.—Excellent. "Progress" is the word, in everything that is good—everything, especially, that makes lighter and cheaper the labor of the kitchen, that must of necessity continually occur. Bread-making, we believe, is work that women do not particularly like. They do not dread it, perhaps, but it is not an attractive labor, so that if bread can be *well* prepared, as would seem by the glowing language of our correspondent, it is certainly an important step in the right direction. We shall endeavor to find the machine, and test its merits.

For the New England Farmer.

PLOWING IN WINTER GRAIN.

MR. EDITOR:—I have a piece of pasturing which was broken up in June. I intend to cross-plow and harrow it, and then *plow* in the grain, instead of harrowing it, as I think is the general practice. The idea was suggested to me by a brother farmer in town, who said that when he sowed winter wheat the last of August or first of September, and plowed it in, he was pretty sure of a good crop, even on rather light, plain land, if properly manured.

I wish to inquire if other persons have had a similar experience, as I think of sowing a portion of my piece with winter wheat.

I wish to say a word in relation to king-birds and bees, suggested by an article on that subject in the *Farmer* of August 9th.

I have nine swarms of bees and four king-birds, that is, there are four which have made my premises their head-quarters, though I have several times destroyed their nest, as I am fully convinced that, so far as bees are concerned, these birds should not be allowed to increase and multiply. I have watched them sometimes, as they darted through the air, and seized the *returning* bees, which I supposed they devoured, but according to the article to which I have referred, they only extract the honey from them. I have also noticed them when feeding their young, which, of course, was on honey only, that they might have a sweet tooth, and as they grew older, gratify it even by murder, pillage and robbery.

Now, Mr. Editor, for one I say, down with the king-birds and rebels. A. C. W.

Leominster, August 11, 1862.

REMARKS.—Do not exterminate them without careful examination. Shoot one or two that you have supposed had taken the bees and examine their crops. If you find bees, or honey there, it will be well to consider what course should be pursued in regard to them. The king-bird is one of our beautiful and active birds, whose place could scarcely be supplied by any other.

For the New England Farmer.

WINTER WHEAT.

MESSRS. EDITORS:—The subject of raising winter wheat is undergoing a revived discussion in this vicinity, if not through all New England. I have often heard ministers preach the importance of enforcing line upon line and precept upon precept, upon their dull hearers, that the impression might be so durable as to produce valuable practical results. Mr. Henry Poor, formerly of North Andover, now of Brooklyn, N. Y., by his perseverance year after year in keeping the farmers of New England awake on the subject of raising winter wheat, has truly been a benefactor to his country. The lacking of faith, as well as excessive credulity on farming, as on religious subjects, is a great obstacle to progress.

I have read Mr. Poor's communications on wheat-raising from the first, but so little faith had I in making the attempt to raise wheat on my Wilmington land, that I did not even try the experiment. Two years ago, my son, (with more hopeful organs,) bought six quarts of winter wheat and sowed it upon about a quarter of an acre of unmanured, sandy land, the last of August, 1860; the work was done in a hurried manner and left in an unpromising condition. On the 23d of July nearly four bushels of good wheat was cradled, notwithstanding severe drought and bad cultivation. On the last of August and first of September, 1861, he sowed about an acre where a crop of oats had been taken off; a light dressing of compost was plowed under with the oat stubble; it came up well, but nearly half was winter-killed. This little field was harvested on the 6th inst., promising a good yield of fine, plump wheat, a discount being made for the winter-killed.

The advantages of raising wheat over corn and rye are very apparent. The operations of planting and hoeing corn two or three times, the liability of its being frost-bitten, cutting the stalks, harvesting, husking and shelling are considerations worthy of the farmer's notice in settling up his bills. The same quantity of manure applied

to an acre of winter wheat which we apply to an acre of corn, an half-bushel of seed, sowing, plowing and harrowing constitutes the labor and expense till harvesting, which may be done by a good cradler in a few hours, the risk of a crop to each is about equal. Now look at the labor of raising corn and wheat, and see how the balance stands. If we can raise 25 bushels of wheat to the acre, on land that would produce 45 bushels of corn; at $1,35 per bushel the wheat would amount to $33,75, and the corn to $29,25. The expensive and laborious process of raising corn must, I think, yield to the less expensive operations of raising wheat, and the wheat crop prove most profitable.

August 5.—According to appearances, our winter rye will not produce much over half as many bushels to the acre as the wheat will, although grown within a few rods of it. SILAS BROWN.

North Wilmington, August, 1862.

N. B.—My most respectful regards to ***, and the subscriber would feel much gratified to have the Stars make a visit to the State Alms-House farm and see if he finds it "barren in extreme."

S. BROWN.

RAMBLES IN THE COUNTRY.

GENTLEMEN:—Having finished the English hay harvest "through much tribulation," on account of the "catching weather," and having a strong desire to see something more of our good State, and to mingle with brother farmers in some towns not heretofore visited, I started from Concord on the fifth instant, in an open wagon, with a steady old horse that had no surplus energy to expend in "highfaluting," either in running, kicking or shying—but whose gait was so slow and dignified as to afford me ample opportunity to notice the crops and the agricultural condition of the country as we went along. My travel was west, the intended terminus being the Hoosac mountains, and to reach them I passed through the centres, or some portion of the following towns: Concord to *Acton, Stow, Bolton, Sterling, Boylston, Princeton, Hubbardston, Barre, Dana, Greenwich, Enfield, Belchertown, Amherst, Hadley, Northampton, Westhampton, Norwich, Huntington* and *Chester*. Then turning more directly west, to *Worthington, Peru, Windsor, Savoy*, into the village of *South Adams*, and slept on the banks of the rippling Hoosac river. Turning to the south, I passed through *Cheshire, Lanesboro', Pittsfield*, and then east to *Dalton, Hinsdale, Middlefield, Huntington*, (a new town,) *Blandford, Montgomery, Russell, Westfield, Springfield*, and from thence by railroad to Boston.

In this jaunt of about a week I have seen and learned more of that portion of the State, than I could have done by travelling in the cars for months. The cars are convenient for the man of business, and well enough when a remote point is to be quickly reached. But to gain any reliable knowledge of the people, or of the condition of agriculture, in travelling by them, is out of the question. Many travellers lose more than one-half of the pleasures of a journey by rushing from one point to another. They find no incidents of interest *by the way*, and the grand goal is almost as barren when they have reached it. To me, when I am in the country, every mile has its charms, whether on mountain, plain or valley, or whether it rain or shine or blow. Nature, every where, is so profuse in beautiful and beneficent things, that travel never ceases to excite study and admiration. He who sees the land all barren as he goes, will never find the elixir he seeks at the end of his journey! The true traveller, like the true philosopher, will find his pleasures as he passes along. In the rocks and grand old trees will he find them, on the hill-side, in the purling brooks or the tumbling waters of the rapid streams. Every face will beam kindly upon him, and out of every mouth he may gather some wisdom worth adding to his own stock. The *pursuit* of happiness is usually a vexatious and profitless labor.

"From our own hearts our joys must flow,"

and if they do not find their seat and centre there, no crystal hills, translucent waters or mountain air will be likely to supply them. "God made the country and man made the town." Both are good—both necessary—but the mind will never expand in the contemplation of the town as it will on lifting up the eye among the green hills which surround me here, and by association with these dwellers among the mountains.

CHESHIRE is in Berkshire county. Hayward's Gazetteer of 1849 contains a brief account of it, which says that "the centre of the town, through which the south branch of the Hoosac runs in a northern direction into Adams, is a rich and fertile valley. To the east and west of this, the ground gradually rises into hills and mountains. The township is admirably fitted for grazing, to which the attention of the inhabitants is principally turned; though considerable quantities of grain are raised. Extensive and valuable dairies are kept, and the *Cheshire Cheese* has acquired a wide and merited celebrity. The famous *mammoth cheese*, presented to President Jefferson, January 1, 1802, contributed much to bring this town into notice. On a given day, the dairy-women sent their curds to one place. The quantity was too great to be pressed even in a cider mill; so that in addition to the intended present, three additional cheeses were made, weighing seventy pounds each. The mammoth cheese weighed about *one thousand four hundred and fifty pounds*. Mr. Jefferson sent back a piece of this to the inhabitants to satisfy them of its excellence; and he also sent pieces of it, it is said, to the governors of the several States."

At the farm of Mr. LUTHER D. WOOD, in this town, and through the kind attentions of his wife, I saw an excellent sample of the famous *Cheshire cheese.* I was admitted to the dairy-room, which was the perfection of neatness, and there, in all their richness and fair proportions, saw fifty cheeses upon the shelves, weighing, in the aggregate, about *two thousand and five hundred pounds*, an *equal amount* having been sent to market in the month of June! These were "new-milk" cheese, as they are termed, which means that they have all the *cream* that the milk contained. This *five thousand* pounds of cheese had been made this season before the middle of August, from a dairy of sixteen cows. In appearance, I have never seen finer cheese. Each one was encircled with a strip of cotton cloth, it being too rich to hold together without such help. Thanks to Mrs. Wood for the opportunity of looking at her cheese dairy, the first I have enjoyed for many years. Back of the house were *thirty-eight* swarms of bees, busily engaged in bringing their luscious stores from the wild mountain-flowers and the white clover of the valleys. The best honey I have found is made from the blossom of the wild raspberry, and these abound in all this region. Mr. Wood had eighteen swarms only in the spring, and they had increased to thirty-eight. Not half the attention is given to the culture of bees that the business deserves in this mountainous region. Truly, the land abounds with milk and honey; the evidence was before me; industry and skill are only required to gather them in and make the household glad. I saw large boxes of most excellent honey, which is sold for a shilling to twenty cents per pound. I suppose *tons* of this highly-prized luxury are left uncollected every year, in this State, much of which might be saved by a little pains in the keeping and care of bees.

The face of the country through which I passed is extremely diversified. After leaving Sterling—one of the most excellent agricultural towns I have seen—old Wachusett, and the lofty hills in its region, came into view, and still beyond them the dim outlines of miniature Alps are seen as far as vision can extend. Most of the valleys are very narrow, rarely expanding to the width of a hundred rods. These are cultivated, however narrow, so that a corn or oat field may frequently be seen containing less than a dozen square rods. Many of the hill-sides are without stones, and in places that can be approached with a team, I occasionally see small cultivated fields. Grass, however, is grown upon them where the hay cannot be taken away by oxen or horses, but is rolled down the hill, or "toted" down with poles, or, perhaps, as is done in some of the mountain towns in New Hampshire and Vermont, got down on sleds. The process of hay-making here is slow and tedious, and in consequence of the frequent rains this season, a discouraging one. Where the land swells into vast hills, only, the extent of the hay-fields is very great. I have passed thousands of acres, having excellent crops, waiting for the mower to come and get it. The land seems admirably adapted to grass, and yet I have not seen stocks of cattle, horses or sheep, or barns, which indicate that a large amount of hay is cut and fed out. What becomes of such an amount as is on the ground this season, I cannot learn, although my inquiries have been somewhat minute on this point. The English hay is not yet half cut, though it is now the 10th of August.

The crops look well all along my route. There is little Indian corn, compared with what is raised in Middlesex, Essex and Norfolk counties. The oat crop, I think, was never better. A large space is covered with it, owing to their high price in the spring, and the demand for them which it was supposed would continue through the year for army uses. Barley is good, although I have seen but few fields of this grain, or wheat in this region. There is little orcharding, compared with the eastern portion of the State, and a large proportion of the trees, which I see from day to day, are of ungrafted fruit.

I have said that I slept one night on the banks of the brawling Hoosac river. This stream passes through the centre of the town of Adams, from north to south. On the northern side of the town, *Spruce Hill* looms up 2,588 feet from the level of the sea, and *Old Greylock* looks down upon the busy villagers from his height of 3,505 feet. *Peru Hill*, upon which stands one of the great, square churches, of a past generation, two or three stories high, rises 2,239 feet above the sea level; and, at a distance, the vane on the church seems to rise about as much more! The village has four dwelling-houses, from one of which no smoke ever rises from the chimney, with "nary" a blacksmith shop, store or school-house!

All along the Hoosac river and the two or three streams which unite and form the Westfield river, there are mills for the manufacture of various articles of wool, cotton, iron and wood. Where several mills are near each other, there springs up a village of more or less consequence, which becomes the centre of business and town meetings, leaving the old, original village deserted and dismal, and with scarcely any thing left but its name. In these, there are rarely any signs of fresh paint, poetry or pluck, but things look seedy, dull and decaying.

In the woods, in the town of Huntington, (a new town, I suppose, as I cannot find it on any map,) I came across a mill where the manufacture of *wooden bowls* is carried on, and I paused half an hour to see the process of making. They are made,

principally, of rock maple, but sometimes of beech or yellow birch. The log is sawed off of the right length, and again longitudinally. It is then put into the lathe, and the outside of the log taken off, leaving the *outside* of the *first* bowl that is to be made from the log, completely formed. The chisel used is a little longer than the depth of the bowl, and shaped just like the curve of the bowl which it forms. There were six bowls made from the half log which I saw turned out, and the work was done in *thirty minutes*. The bowls were beautifully formed, and left very smooth. The largest was twenty-six inches across the top, and the smallest about ten. I had often wondered how this work could be done, but on seeing it found the process simple, and very ingenious. I have seen and heard many interesting things in my jaunt, some of which may be alluded to hereafter.

Very truly yours, SIMON BROWN.

MESSRS. NOURSE, EATON & TOLMAN, BOSTON.

TIME.

Many are the matches which I have had against time in my time and in his time (*i. e.*, in time's time.) And all such matches, writing or riding, are memorably unfair. Time, the meagre shadow, carries no weight at all, so what parity can there be in any contest with him? What does he know of anxiety, or liver complaint, or income tax, or of the vexations connected with the correcting of proofs for the press? Although, by the way, he does take upon himself, with his villanous scrawl, to correct all the fair proofs of nature. He sows canker into the heart of rosebuds, and writes wrinkles (which are his odious attempts at pothooks) in the loveliest of female faces. No type so fair, but he fancies, in his miserable conceit, that he can improve it; no stereotype so fixed, but he will alter it; and having spoiled one after another, he still persists in believing himself the universal amender and the ally of progress. Ah! that one might, if it were but for one day in a century, be indulged with the sight of Time forced into a personal incarnation, so as to be capable of a personal insult—a cudgelling, for instance, or a ducking in a horse pond. Or, again, that once in a century, were it but for a single summer's day, his corrected proofs might be liable to supersession by *revises*, such as I would furnish, down the margin of which should run one perpetual iteration of *stet, stet;* everything that the hoary scoundrel had *deleted*, rosebuds or female bloom, beauty or power, grandeur or grace, being solemnly reinstated, and having the privilege of one day's secular resurrection, like the Arabian phœnix, or any other memento of power in things earthly, and in sublunary births, to mock and to defy the power of this crowned thief, whose insatiate scythe mows down every thing earthly.—*Thomas De Quincy.*

STAMPING FRUIT.—A German journal publishes the following: At Vienna, for some time past, fruit dealers have sold peaches, pears, apples, apricots, &c., ornamented with armorial bearings, designs, initials and names. The impressions of these things are effected in a very simple manner. A fine fruit is selected at the moment it is beginning to ripen—that is, to take a red color—and paper, in which the designs are neatly cut out, is affixed. After a while, the envelope is removed, and the part of the fruit which has been covered, is brilliantly white. By this invention the producers of it may realize large sums.

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

A WALK THROUGH MY GARDEN.—(*Continued.*)

In my last "Notes" a brief description was given of the cold grapery. I may add here, that the fruit continues to look well, and that bunches on the "ringed" spurs have already (Aug. 5) commenced to "color."

The general plan of the garden is, in brief, the following: There is a row of vines next to the fence, on all sides, then comes a walk, and inside of the walk the ground is filled with fruit trees, at equal distances of eight feet apart. In each corner of the garden is a standard apple tree. In the outside row of trees, standards and dwarfs alternate, the central rows being almost wholly dwarfs. Between the trees, each way, are planted currants—a single bush in each space—and in the centre of each square thus formed is planted a vine. These currants and vines will be removed whenever the trees need the whole ground. Thus much for the general plan, and now a few notes on the *Out-Door Grapes*. Of the 520 feet of fence enclosing the garden 350 feet is lined with a wire trellis. This trellis is made by stretching six strands of No. 11 annealed wire along the inner sides of the fence posts, at one foot apart, making the trellis six feet in height. The wires are fastened to each post by a wire staple, (No. 8 wire,) and were drawn sufficiently taut by a simple clamp, or pair of wooden tongs, made of two strips of fence pickets, between which the wire was clapsed. The cost of the wire was seven cents per pound, and the amount used was 90 pounds, making a total cost of $6,30 for 340 running feet of trellis. The labor of putting it up was about one day each for two men. Another trellis is made by setting cedar posts, seven feet long, about thirty inches into the ground, along the top of which (about four feet from the ground,) is nailed, flatwise, a spruce joist, of 2×3 inches, and about fifteen inches from the ground is nailed a strip of board about six inches wide. To these are nailed vertical slats, made by sawing spruce boards into strips of three-fourths inch thick. To make the trellis somewhat ornamental, these slats are placed "diamonding," at eight inches apart. Considering its durability and neat appearance, I think this the best cheap trellis for gardens I have seen.

The number of vines in the garden is about 160, including fifty-two varieties. Several distinct methods of training are practiced, varying according to location of vines, habits, and objects in view. One row of Hartford Prolifics are planted six feet apart, and trained upon the "long rod renewal" method; a row of Concords are but two feet apart, and trained upon the "single cane dwarf renewal" method recommended by Bright, in his

Grape Culture; another row of vines are placed three feet apart, and trained according to the old "single cane renewal" of the books; and several vines are allowed to ramble pretty much as they please; the principal care being to keep up a good stock of bearing wood.

Thus much for the trellises, and training, and now for a few notes upon the different varieties of grape.

Allen's Hybrid.—A pot vine of 1861; now making a fair growth, of very handsome wood; expect it will prove worthy of general cultivation a little further south—and perhaps here.

August Pioneer.—A layer of 1861; has made a vigorous growth; said to be a desirable, hardy fruit, but I doubt if it comes quite up to its ministerial recommendation.

Blood's Black.—A layer of 1861; fair grower.

Black Seedling.—Strong grower; promises well for a wilding seedling.

Clark's Seedling.—A layer of 1861; has not grown well with me; one died, and this one started late, and grows feebly—probably was layered from the last year's wood; is well spoken of by those who ought to speak truly.

Clinton.—One of the feeblest growers I have; layers of 1860, planted 1861, have made but little wood, and show no signs of fruit; expect it to be desirable in New England as a wine grape.

Canadian Chief.—A pot vine of 1861; feeble growth; do not expect much from either vine or fruit, though, from its origin, and handsome bunches, I wish it may prove desirable.

Cuyahoga.—A pot vine of 1861; feeble; expect it to prove desirable.

Canby's August.—A layer of 1861; feeble growth, and very small foliage.

Concord.—Vines of one to five years old; strong growers; out of thirty-three have not lost one; layers of 1859, planted 1861, show a goodly number of handsome bunches; stands very near the head of the list of desirable out-door grapes for this latitude. One row of twenty-seven vines is trained according to Bright's method—*i. e.*, each vine is allowed to grow but one cane, which is fruited one year, and then cut down, and next year a new cane is grown, to fruit the year after. In this way a crop is grown every other year. By cutting down every other vine each fall, I have a fruiting cane every four feet. This is a very simple method, and will return good crops, but it costs more to stock a vineyard than by most other methods. The Concord thus far behaves admirably under this discipline.

Delaware.—Pot vines of 1860, planted 1861, made a feeble growth the first year, (one-half of them dying outright,) but this year will give single canes of four to six feet of good wood. Very hard to propagate, either from eyes or layers. For quality of fruit, and hardiness, this stands at the head of the list of out-door grapes, but I expect it will soon be eclipsed by a larger variety. Thus far I find it rather a troublesome vine to train, on account of its disposition to send out numerous laterals. But as at present advised, I consider it the leading grape, for vineyard or garden. It leaves little to be desired, except *size*, and that I shall doubtless secure ere long.

Dracut Amber.—Three year old layer when planted, 1861; made rather poor growth last year; this year growing finely, but only set one feeble bunch of fruit; is spoken of as a fair table-grape, but promising well for wine. From Dr. Jackson's analysis, I am inclined to the opinion that it may prove worthy of general cultivation for wine purposes; but it must show greater bearing qualities than as yet with me, or it will be passed to the rear.

Diana.—One vine five years old, planted 1860, made good growth, but shows only a few very poor bunches of fruit; find it slow getting layers from it. Of fifteen purchased layers of 1860 planted in 1861, only five survived, and they have not yet shown much vigor; of some eight or ten planted this year, all have made a moderate growth. Late and uneven ripening are serious objections to this otherwise desirable grape.

Early Isabella.—Said to be a seedling of the old variety, but two weeks earlier. Appears and grows much like the original, and a specimen of fruit on layer of 1861 throws a doubt on its early ripening.

Empire.—Layer of 1861; a very vigorous grower; smooth leaf, and badly eaten by insects, and so far as present appearances indicate, it is too succulent and tender for this latitude.

Early Hudson.—Layer of 1861; strong growth, and looks promising.

Franklin.—Layer of 1861; a fair growth.

Garrigues.—Layer of 1861; a very vigorous grower; looks well.

Granite State.—A very strong grower; fair-sized bunches, but berries now twice the size of either Concord, or Hartford Prolific. Said to be a fair table grape; not yet proved for wine; ripens 1st to 10th September.

Hartford Prolific.—Of twenty layers of 1860, planted 1861, every one made a very vigorous growth, and several ripened a specimen of fruit; propagates early; vines this year have double the fruit of Concords one year older; evidently a great bearer. Is a fair table grape, and analysis speaks well for its wine-making qualities. Deserves more attention here at the north-east.

Isabella.—More mildew on one vine, than on all my other varieties put together; crops very nearly ruined.

Jennings.—Layer of 1861; good growth; looks well, and is well spoken of.

Logan.—Layer of 1861; good growth.

Louisa.—Similar to Isabella; said to be earlier; layer of 1861; vigorous growth.

Marion.—Layer of 1861; moderate growth; small foliage; not very promising.

Northern Muscadine.—Layer of 1861; fair growth; generally considered as a very ordinary native grape.

Nancy.—Layer of 1861; good growth, of very slim cane; not very promising.

Ontario.—Layer of 1861; fair growth.

Oporto.—Layer of 1861; a strong growth; gives promise to be a desirable wine grape.

Pennel.—Layer of 1861; a fair growth, but small foliage.

Perkins.—Layer of 1861; good growth; is well spoken of for its fair quality, earliness and hardiness.

Rebecca.—The tenderest and feeblest vines I have. Generally reported to me as too tender for this latitude, but a fine grape, when well grown.

Rogers' Hybrids.—I am convinced that several of these will prove decidedly popular, and worthy

of general cultivation. Nos. 9 and 15, pot vines of 1861, good growth. No. 19, large and handsome layers of 1861; a very vigorous grower—equal to any in my collection. This grape proves to be of good quality, hardy, prolific, and earlier than the Concord. Berries never drop, and keep well. Bunch and berry large and handsomc. Several good (amateur) judges in my acquaintance pronounce it a much more desirable grape than the Concord. A small layer of 1859, planted in 1860, gave thirty large layers in 1861, every one of which is growing well in 1862. In two neighbors' gardens, the grape is ripened about one week before the Concord.

Sage.—A well-known "Shaker grape," of rather poor quality, but hardy and vigorous.

Taylor's Bullitt.—Layer of 1861; a very vigorous grower, but canes look tender, and leaf smooth, tender, and badly eaten. Of doubtful hardiness.

Union Village.—Pot vine of 1861; good growth; rather too late for this section.

Warren's Seedling.—Layer of 1861; a strong growth; looks well, and is well spoken of.

In my next, I shall take a look at the pear trees.

ELEGY ON "POOR CHARLEY,"

Who, having reached the age of dry bones, (28,) in attempting to kick up his heels, like a colt, broke one of his legs. Not able to commit suicide, as Plato did when he broke his finger, one of the farmers shot him:

Here lies a faithful steed—
A stanch, uncompromising "silver-gray"—
Who ran the race of life with sprightly speed,
Yet never ran—away.

Wild oats he never sowed,
Yet masticated tame ones with much zest;
Cheerfully he bore each light allotted load;
As cheerfully took rest.

Bright were his eyes, yet soft,
And in the main his tail was white and flowing;
And though he never sketched a single draught,
He showed great taste for drawing.

Lithe were his limbs and clean,
Fitted alike for buggy or for dray;
And like Napoleon the Great, I ween,
He had a martial neigh.

Oft have I watched him grace
His favorite stall, well littered, warm and fair,
With such contentment shining from his face,
And such a stable air;

With here and there a speck
Of roan diversifying his broad back;
And, martyr-like, a halter round his neck,
Which bound him to the rack.

Mors omnibus! at length
The hey-day of his life was damped by death;
So summoning all his late remaining strength,
He drew—his final breath. T. Spoon.

A Hat and a Horse.—If caught in a shower, and you get your hat wet, brush it before it is dry. And so of the horse. When he comes in, wet with perspiration, smooth his hair with a coarse brush—a common broom is better than nothing—in the direction you wish it to lie when he is dry. The animal will feel better, and it will be only half the trouble to clean him the next time he needs it. Mr. S. will be kind enough to try this on his new "beaver," [made of silk, perhaps cotton, now,] and Mr. W. on his four-year-old dapple grey colt.

For the New England Farmer.

AGRICULTURE IN THE HAWAIIAN ISLANDS.

Makawao, Maui, Hawaiian Islands, May 16, 1862.

My Dear Sir:—It is quite time to address you after reaching my island home, and getting things somewhat straightened about me. I am sorry that I could not see you again at your office, but though I called twice near the time of my leaving Boston, I could not find you. This was all right, as you were doubtless where duty called. "Duty, stern daughter of the voice of God!" Since I last entered your office in obedience to her call, I left the land of my birth, and am now in the land of my adoption, some 8000 miles, the most direct way from your goodly city. The Lord bless old Boston, the metropolis of New England.

Your readers will not care very much to hear of my voyage to San Francisco and the Islands; rather will they desire to know how I found things on shore and things pertaining to agriculture. To the extent of my ability I will gratify so reasonable a desire.

I arrived in San Francisco, November 6, and remained there about a week. I visited Oakland, and the mission, so called, about a league distant from the city, a place which I saw in 1829 then occupied by the Mexicans, and the most thickly settled of any part of San Francisco. I hoped to make a longer stay, that I might go into the interior a short distance, and see the products of the country; but an opportunity offering for Honolulu, I felt it my duty to leave at once. In visiting the San Francisco markets, I was much disappointed in finding the vegetables, potatoes, turnips, beets, carrots and onions, of so diminutive a size, compared with what I had been told to expect. I supposed that I should find beets of the size of a man's thigh or, perhaps, body, and potatoes like one's head, but I saw no such mammoth vegetables. My impression is that Boston market has as fine a show as San Francisco in the line of vegetables; and in many things, as meats, fish, butter and cheese, Boston is, of course, far before the city of the Pacific. At one thing only was I astonished—the seeing, the hearing of, and tasting the fruits of California. I should hesitate to tell you the measurement of some of the apples and pears which I saw. What would you think of a pear that weighed four pounds and a quarter? Such a pear grew in Oakland last year! The fruit, too, is most excellent. Nothing so good did I taste in 1860, in my travels from Bangor, Maine, to Cincinnati, Ohio, and you know that 1860 was an extraordinary season for fruit. California will be a fruit country, and no mistake.

Let me now tell you of Hawaii. It is now more than two years since I wrote you from Makawao, so I must give you an account of the products of two seasons, 1860 and 1861. The crop of wheat of 1860 at Makawao and vicinity was a very fair one, but the market was very soon supplied, and the surplus was sold at so low a price, that our

Hawaiian farmers were much discouraged. In consequence, much less was sown in 1861. Only some 10,000 bushels were raised, but this was of a superior quality, and sold for one dollar per bushel. More was needed than could be obtained, and seed this spring sold readily for $1.50 per bushel. A good many oats and some barley and buckwheat were raised, and found a market. In 1861 considerable Indian corn was raised, and it sold for a fair price. The prospect of obtaining a higher price for wheat the present year than had been offered the past two years, stimulated our people to sow more than they had done. In February and March a good deal was sown, and but for the cut worm the crop would have been large. The earliest sown, some of which is nearly ready to be cut, looks very well, the latest sown is nearly destroyed by the worm. This is very discouraging, but there seems to be no help for it. "Long patience" becomes the husbandman.

Of the crop for the present year I will speak again, if spared, after the harvest shall have been gathered. We are now having gentle rains which, may bring forward the late sown wheat so that what remains of it will be stout and of good quality. More than usual Indian corn was raised last year, and our farmers are planting again this spring. As there are but few whaleships remaining, the cultivation of the Irish potato has greatly diminished. Indeed, there is likely to be a great change in the agricultural products of the islands.

The cultivation of sugar cane and the manufacture of sugar are decidedly successful, and this branch of business is rapidly increasing. In my own vicinity there are already three large plantations, with houses and machinery of improved pattern for manufacturing. Several landholders in the vicinity of these plantations are now turning their attention to the raising of cane, so that the prospect of a great increase of the amount of sugar is very fair. At Ulupalokua, some twenty-five miles distant, there is a plantation of several hundreds of acres of cane of promising growth. A mill of superior construction has lately arrived from Boston for this plantation. Wailuku, fifteen miles distant, and Waitepu, a neighboring village, are lands well adapted to sugar cane, and they will both be appropriated ere long to this product. The late King, Kamehameha III., several years ago, and while I resided there, caused a large tract to be planted at Wailuku, and erected a water mill to grind his cane. The experiment proved a failure, however, through the unfaithfulness of the man—a Chinaman, whom he employed as superintendent. Lahaina, which you will recollect as the metropolis of this island, is nearly deserted by whaleships, and there is scarcely anything doing in the shape of trade. But it is probable that all the land that can be spared from kalo, the native staple, will be filled with cane. Much is already planted, and sugar is being manufactured on a small scale. I doubt not that Lahaina will more than recover its importance in consequence of this new business, and I am sure there will be great gain.

Another enterprise has begun to be urged among us, which promises large results. I allude to rice growing. The experiment of growing rice was made some twenty years ago at Wailuku, and succeeded so far as to satisfy all of us that rice could be raised at the islands without any difficulty. But it was given up because it was doubtful whether it would be as valuable a product as the kalo. I see I'm spinning out my letter too long. Let me pause. Thine with respect,

J. S. GREEN.

For the New England Farmer.

LITTLE THINGS:

OR A WALK IN MY GARDEN.

Among the little things that most men despise, and do not consider worth their study, is that of

INSECTS INJURIOUS TO VEGETATION.

Insects are among the greatest enemies to the gardener and farmer, and it is gratifying to know that we can, to a certain extent, avoid their depredations as soon as we become familiar with their habits.

Farmers who sow their wheat as early as possible succeed in avoiding, to a great extent, the ravages of the weevil. Many prepare their ground in the fall, so as to harrow it as early as they can in spring. It may now be pretty safely predicted what will be the wheat crop by the time farmers are able to sow it.

The apple tree borer, which but few farmers knew anything about twenty years ago, while they were destroying their orchards, is now known to every good farmer, and his ravages prevented, simply by cutting them out, or what is better, using a straight awl and mallet and by keeping the ground clear around the trunks of the trees, and applying some wash to young orchards in the month of June, made of soda, lime, salt or potash, either of which will prevent them from depositing their eggs.

If we step into the garden we shall there find enough to try our patience. But let us see. I have been overrun with the grub worm, but I have stopped him from eating down my cabbages, simply by tearing a slit in a piece of paper eight inches square and slipping the plant through it, thus making a paper platform around the plant, which must be kept down by a lump of earth or a stone. Care should be taken to have the paper close round the plant, as they will sometimes crawl up through the paper. I have had complete success the present year in saving my cabbage plants.

To save vines from the striped bug, nothing is easier than to place half of a common-sized newspaper over the plant, and hoe a little earth on the edge of the paper. The plants will grow faster in May and June than if exposed to the air, and it is a perfect protection.

The curculio is still a troublesome insect, but I am inclined to think that in fruit-bearing years most northern localities can obtain a good crop by cultivating highly so as to cause as many blossoms to set as possible. It has occurred to me that if a few of the Canada plum tree should be allowed to bear near by, that they would furnish a more desirable treat to the curculio. They bite those much more readily than the ordinary plum. I shall get a good crop this year, though many of them have been destroyed by this pest.

Our gardeners in this vicinity cannot raise onions from the seed on account of the maggot, but they obviate this by planting the potato and top onions, which do not seriously suffer from its ravages. Fine beds may now be seen in most gardens

where they have long been destitute of this esculent.

Thus as we become acquainted with their habits, we may in a measure get rid of the most troublesome insects. There are some which still trouble us, such as the spindle worm in our corn, the currant worm, and the little maggot that eats the roots of cabbage and turnip plants, and a fly that eats off the beet as soon as it appears above ground. A word here in regard to the

BLACK KNOT.

This is not produced by the curculio or any other insect. If it was, I should be overrun with it, whereas it never appears in my garden. It is unquestionably a specific disease, which communicates its poison from tree to tree and which furnishes a welcome nest for certain insects. Gardens where trees are badly crowded together, are usually affected the worst.

LITTLE MISTAKES.

I must stop here to correct a little mistake in my last article. I spoke of the Editor of the *Farmer* as an advocate for August pruning. It should have been *summer* pruning. Things as trivial as that have brought on desolating wars. How important that we should take care of little things!

ST. CATHERINE'S PRUNE.

I noticed a fact that the curculio does not touch this plum in my garden at all. Is the plum worth cultivating? I received the scions from France.

N. T. T.

REMARKS.—We have not raised the St. Catherine. Downing says that "among the fine old varieties of late plums, the St. Catherine is one of the most celebrated. In France it is raised in large quantities, in some districts making the most delicate kind of prunes. It is also much esteemed for preserving, and is of excellent quality for the desert. It bears regularly, and abundantly in this part of the country, [that is, along the Hudson,] and deserves a place in every good garden."

It is not yet well settled whether the *black knot* is occasioned by insects, or is a disease. High authorities are of different opinions.

CLEANING MILK VESSELS.—A correspondent of the *Cincinnati Gazette* truly says, there is no product of the farm that presents so much difference as butter. This arises chiefly from using vessels for holding the milk, and utensils in making the butter, which are soured. In my notice of the effects of having soured troughs in sugar-making, I stated that acidity was fatal to good sugar-making. It is not less so in butter-making. Milk has a peculiar acid very easily formed, which entirely takes away that rich, sweet, fine flavor, belonging to good butter. A very little soured milk or cream on vessels rapidly generates enough acid to take it away. To avoid this great care is requisite. Cleanliness only is not sufficient, in having the vessels well washed, but they must be carefully washed in boiling hot water, and should be boiled in it also. But as the cream is very apt to stick, even in good washing, when the vessels are boiled in water, *some pearlash or soda should be put in it*, which destroys any acidity that may be about the vessels. They should then be well sunned. I have known some good butter-makers who dispensed with the sunning when soda was used, but both are to be commended.

AGRICULTURAL EXHIBITIONS FOR 1862.

Time of exhibitions by the Agricultural Societies in the State, and the Delegate from the Board of Agriculture to each society.

SOCIETY.	COMMENCES.	DELEGATE.
Essex	Sept. 30	P. Stedman.
Middlesex	Sept. 18	Jabez Fisher.
Middlesex South	Sept. 23	Levi Stockbridge.
Middlesex North	Sept. 25	Samuel Hartwell.
Worcester	Sept. 18	Joseph White.
Worcester West	Sept. 25	D. A. Cleveland.
Worcester North	Sept. 30	E. W. Bull.
Worcester South	Oct. 2	M. Stebbins.
Worcester South-East	Oct. 14	Asa Clement.
Hamp., Franklin and Ham.	Oct. 2	H. H. Peters.
Hampshire	Oct. 9	John Brooks.
Highland	Sept. 11	Paoli Lathrop.
Hampden	Oct. 7	S. B. Phinney.
Hampden East	Oct. 14	S. H. Bushnell.
Franklin	Sept. 25	George B. Loring.
Berkshire	Oct. 1	M. P. Wilder.
Housatonic	Oct. 7	C. C. Sewall.
Hoosac Valley	Sept. 23	C. G. Davis.
Norfolk	Sept. 25	Henry Chapin.
Bristol	Oct. 7	Freeman Walker.
Plymouth	Oct. 2	John B. Moore.
Barnstable	Oct. 14	J. S. Grennell.
Nantucket	Sept. 30	Henry Colt.
Martha's Vineyard	Oct. 21	Matthew Smith.

State Fairs for 1862.

Below we give a list of State Fairs, as far as we have been able to learn the time of holding them. We shall publish this list, with additions and corrections, from time to time, until the season is over.

Vermont	Rutland	Sept. 9—12.
Canada East	Sherbrooke	Sept. 17—19.
Kentucky	Louisville	Sept. 16—19.
Illinois	Peoria	Sept. 29—Oct. 3.
New York	Rochester	Sept. 30—Oct. 3.
Ohio	Cleveland	Sept. 16—19.
Iowa	Dubuque	Sept. 30—Oct. 3.
Michigan	Detroit	Sept. 23—26.
Pennsylvania	Norristown	Sept. 30—Oct. 3.
Indiana	Indianapolis	Sept. 30—Oct. 3.
New Jersey	Newton	Sept. 30—Oct. 3.
Connecticut	Hartford	Oct. 7—10.

DARK ROOMS.—Florence Nightingale, in her Notes on Nursing, says: "A dark house is almost always an unhealthy house, always an ill-aired house, always a dirty house. Want of light stops growth, and promotes scrofula, rickets, etc., among the children. People lose their health in a dark house; and if they get ill, they cannot get well again in it. Three out of many 'negligences and ignorances' in managing the health of houses generally, I will here mention as specimens. First, that the female head in charge of any building, does not think it necessary to visit every hole and corner of it every day. How can she expect those who are under her to be more careful to maintain her house in a healthy condition, than she who is in charge of it? Second, that it is not considered essential to air, to sun, and to clean rooms while uninhabited; which is simply ignoring the first elementary notion of sanitary things, and laying the ground ready for all kinds of disease. Third, that the window, and one window, is considered enough to air a room. Don't imagine that if you, who are in charge, don't look to all those things yourself, those under you will be more careful than you are."

EXTRACTS AND REPLIES.

THE BUR-MARIGOLD.

Will the editor please inform me what is the name of the enclosed "posy," and oblige a North Ferrisburgh SUBSCRIBER.

Aug., 1862.

REMARKS.—The plant enclosed is a common one in Massachusetts, and we believe is the *Bur-Marigold.* It grows on a long, slender stem, and bears a yellow flower, having four or five leaves.

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TRANSMISSION OF PROPERTIES.

I wish to call your attention to a piece I find in the *Vermont Chronicle* of May 27, 1862, headed, "Transmission of Properties, Diseases, &c." I would like to see your comments upon it, and its application, not only to the human family, but to the breeding of sheep and other kinds of stock. There are a few thoughts upon my mind that I might like to present at some future time.

Sharon, Vt., Aug., 1862. A. S. PHELPS.

REMARKS.—Send the article along, and your own thoughts, and we will consider them.

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A GOOD WASH FOR OUTSIDE BUILDINGS.

Thinking some of your readers may like a good receipt for a wash for buildings or fences, I will give you one which I have used for ten or twelve years. It is almost equal to paint.

Take half a bushel of lime and slake it with boiling water; then add one peck of salt and two pounds of glue dissolved in warm water. Add eight pounds of dry, yellow paint, and two large papers of lamp black, mixed to a paste with alcohol. This makes a beautiful slate color. The color can be varied by adding more or less black to suit the taste. F. E. BIGELOW.

Concord, Mass., Aug., 1862.

MORTAR FOR BUILDING.

In common practice, the cohesion of mortar is greatly impaired by using too large a portion of sand; it should never exceed two parts by measure to one of lime paste. A cask of lime weighing 280 lbs., made into eight cubic feet of lime paste, should be mixed with sixteen bushels of damp sand. The notion used to be generally entertained that the longer lime was slaked before it was used, the better would be the mortar made of it.

This, however, is not the case with our common fat lime and sand mortars. The sand should be mixed with the slaked lime as soon as the latter becomes cold, and no more water should be employed than will reduce the lime to a thick paste. In preparing mortar, the unslaked lime should be placed on boards and sheltered from the sun and rain; it should be open above and surrounded with some sand. The water necessary to slake lime should be poured upon it with any suitable vessel, and care should be taken to stir the lime so as to bring the water into contact with every portion, when it may be left until all the vapor has passed off.

The sand may now be incorporated with the lime by means of a hoe or shovel; and, if necessary, a little water may be added to produce a homogeneous, consistent paste, when it is ready for use. Sand from the sea-shore should never be employed for making mortar without being first washed with fresh water, because the salt left in such sand is liable to absorb moisture and prevent the mortar becoming hard.

In putting up walls of brick or stone, care should be taken that the stones or bricks be moistened before they come in contact with the mortar. Every brick and stone should be laid in a good bed of mortar, and should receive a blow to fix it firmly. The bricks should not be laid merely as is the common custom, but forced down so as to press the mortar into all the pores and crevices. The superintendent of a building should give his personal attention to the vertical joints in the walls, as the masons frequently neglect to fill them up with mortar.—*Scientific American.*

YOUTH'S DEPARTMENT.

THE DRY STREAM.

"John," said Isaac, to his brother, "do you know that the brook in the sheep pasture has dried up?"

"No; I do not know any such thing."

"It is dry."

"I saw it running not an hour ago."

"It was dry this morning. I was going to cross over on the fence, but there was no water in the bed of the stream above or below the fence. I heard father say the brook never failed."

"I know it has not failed."

"That comes pretty near saying you don't believe what I say."

The brothers went on disputing till they got very angry. At first, one was sure that the other was mistaken. When they became angry, one was sure that the other had asserted an untruth.

Now, the fact was, that both had spoken the truth. When the stream was low, there was a gravel bank by the fence mentioned by Isaac, through which the water percolated without appearing on the surface. John had seen the water flowing as usual in its channel some twenty rods below the fence.

Men often dispute about things in regard to which they really do not differ. They look at the subject from different points of view. Before you decide that a man is wrong because he differs from you, see from what point he views the matter.—*S. S. Times.*

THE KANGAROO AND HIS PUPS.

How many times, on my hunting excursions, have I painfully witnessed the poor doe—when hard pressed by the hounds—hastily pull from her pouch the almost hairless and utterly helpless little Joey (as its offspring is called,) and cast it, whilst at full speed, into a tuft of high grass, or clump of thick fern plants, as the last resource whereby to save herself from the ruthless fangs of her hungry pursuers. And hundreds of times have I seen our magnamimous dogs spring over the Joeys, as if such puny prey were unworthy of their notice, and continue in hot pursuit of the poor, panting mother, who, if so fortunate as to outstrip the hounds, in one hour's time would in-

stinctively return to the spot where she had left her young one, and, on recovering her dear Joey, would hurriedly replace it in its sanctuary, and retire far away, amidst the hills and valleys, for many successive weeks. But Master Joey is frequently captured by the huntsman, reared up by hand, and invested with a bright scarlet collar, to distinguish him from his uncivilized brethren. I brought up one, which formed a great source of mirth and admiration to us all. To witness gentle, unsophisticated Joey turn out of his warm crib at daylight, and join the hounds and half-a-dozen huntsmen, displaying his great agility and delight by clearing dogs, buckets, and iron pots at a single bound, added considerably to the fun and good-humored witticisms which always enliven an early hunting-party, even in the green forests of the antipodes. In the heat of the chase, gentle Joey—arrived at the age of two years—could keep pace with the swiftest of our pack; invariably took his place, leaping in the midst of them, and was always in at the death.—*Thirty-three Years in Tasmania and Victoria.*

LADIES' DEPARTMENT.

MARRIAGE OF DAUGHTERS.

Henry Taylor, in his "Notes from Life," comprises not a little sound as well as practical philosophy upon the incidents leading to marriage, and the relations of mothers thereto. We give it for the benefit of both mothers and daughters:

"If an unreasonable opposition to a daughter's choice be not to prevail, I think that, on the other hand, the parents, if their views of marriage be pure from worldliness, are justified in using a good deal of management—not more than they very often do use, but more than they are wont to avow or than society is wont to countenance—with a view to putting their daughters in the way of such marriages as they can approve. It is the way of the world to give such management an ill name, probably because it is most used by those who abuse it to worldly purposes; and I have heard a mother pique herself on never having taken a single step to get her daughters married, which appeared to me to have been a dereliction of one of the most essential duties of a parent. If the mother be wholly passive, either the daughters must take steps and use management for themselves—which is not desirable—or the happiness and the most important interests of their lives, moral and spiritual, must be the sport of chance, and take a course purely fortuitous; and in many situations, where unsought opportunities of choice do not abound, the result may not improbably be such a love and marriage as the mother and every one else contemplates with astonishment. Some such astonishment I recollect to have expressed on an occasion of the kind to an illustrious poet and philosopher, whose reply I have always borne in mind when other such cases have come under my observation—'We have no reason to be surprised, unless we know what may have been the young lady's opportunities. If Miranda had not fallen in with Ferdinand, she would have been in love with Caliban.'"

ON A WEDDING DAY.

Nine years ago you came to me,
And nestled on my breast,
A soft and winged mystery,
That settled here to rest;
And my heart rocked its babe of bliss
And soothed its child of air
With something 'twixt a song and kiss,
To keep it nestling there.

At first I thought the fairy form
Too spirit-soft and good
To fill my poor, low nest with warm
And wifely womanhood.
But such a cozy peep of home
Did your dear eyes unfold;
And in their deep and dewy gloom
What tales of love were told!

In dreamy curves your beauty droopt,
As tendrils lean to twine,
And very graciously they stoopt
To bear their fruit, my vine!
To bear such blessed fruit of love
As tenderly increased
Among the ripe vine-bunches of
Your balmy-breathing breast.

We cannot boast to have bickered not
Since you and I were wed:
We have not lived the smoothest lot,
Nor found the downiest bed!
Time hath not passed o'erhead in stars
And underfoot in flowers,
With wings that slept on fragrant airs
Through all the happy hours.

It is our way, more fate than fault,
Love's cloudy fire to clear;
To find some virtue in the salt
That sparkles in a tear!
Pray God it all come right at last,
Pray God it so befall,
That when our day of life is past
The end may crown it all!

GERALD MASSEY.

DOMESTIC RECEIPTS.

HOW TO MAKE ELDERBERRY WINE.—The berries, when ripe, are picked by the stems, then stripped with the hands, or trimmed with shears. Next they are mashed fine, which can be done by means of a pounder, similar to those used for pounding clothes. Let them remain until the next day, when the juice is pressed out in a cheese press, or any other convenient way. Next, boil the juice twenty minutes; skim it, and add four pounds of sugar to the gallon. When milk-warm add a small piece of bread crust that has been dipped in yeast. Let it stand three days, remove the crust, and the wine is ready for bottling. Age improves it. Some add spices to the liquor when boiled. This is a great favorite with the English.

TO DRESS CUCUMBERS.—Take three good-sized cucumbers, pare them, put them in cool water for an hour, take them out and cut them in the usual way; sprinkle salt upon them and let them be so until an hour before dinner; drain off the salt liquor; put them into a vegetable dish. Take a pint of sour cream, (*not too old,*) a good tablespoonful of cider vinegar, a piece of butter the size of a hickory nut; put them on the fire and let the mixture come to a boil; pour it over the cucumbers while hot; set them by in a cool place until dinner. We think it is the only way to eat them. Try it. So says a lady in the *American Farmer.*

OLD-FASHIONED HULLED CORN.—Shell a dozen ears of ripe, dry corn, put it in an iron kettle and cover with cold water; put in the corn a bag of two teacupfuls of fresh wood ashes, and boil until the corn looks yellow and tastes strong of the alkali, then take out the bag and boil the corn in the lye over an hour, then pour off the lye, add fresh water and simmer until the corn swells. If the hulls do not then come off by stirring, turn off the water and rub them off with a towel; add more water, and simmer for three or four hours, often stirring to keep it from burning; when it swells out and becomes soft and white, add salt to liking, and let all the water simmer away. Eat warm or cold, with cream or milk.

PINE-APPLE JELLY.—Take a perfectly ripe and sound pine-apple, cut off the outside, cut in small pieces; bruise them, and to each pound put a teacup of water; put in a preserving kettle over the fire; cover the kettle, and let them boil for twenty minutes; then strain it, and squeeze it through a bit of muslin. For each pound of fruit take a pound of sugar; put a teacup of water to each pound; set it over the fire until it is dissolved; then add the pine-apple juice. For each quart of the syrup clarify an ounce of the best isinglass, and stir it in, let it boil until, by taking some on a plate to cool, you find it a stiff jelly. Secure it in jars.

POTATOES IN HASTE.—A nice dish of potatoes may be made in five minutes, if the water is boiling. Peel and cut some potatoes in slices; pour on them boiling water enough to cover them, and let them boil till tender; skim them out, add butter with flour; let it boil up once, add a little chopped parsley and pepper.

INTERESTING TO THE LADIES.—For once the course of true love has run smoothly. When the Duke of Portland died recently in England, he tried to prevent the marriage of his daughter, Lady Mary Bentinck, with Sir William Topham, by stipulating in his will that her dowry of £32,000 should be withheld in case she disobeyed his commands. The lovers were warmly attached, and Sir William carried the case into court, determined to have the lady, and her portion with her. The court decided that the Duke had no right to encumber the apportionment of money under a marriage settlement with such capricious conditions, and the funds were made over to Lady Mary. Whereupon the lovers were made happy.

If we had not within ourselves the principle of bliss, we could not become blest. The grain of heaven lies in the breast, as the germ of the blossom lies in the shut seed.

THE CATTLE MARKETS FOR AUGUST.

The following is a summary of the reports for the four weeks ending August 21, 1862:

NUMBER AT MARKET.

	Cattle.	*Sheep and Lambs.*	*Shotes and Pigs.*	*Live Fat Hogs.*
July 31	1668	8758	270	750
Aug. 7	1639	5380	200	150
" 14	2101	5769	350	750
" 21	1649	7064	190	—
	7057	26,971	1010	

PRICES.

	July 31.	*Aug.* 7.	*Aug.* 14.	*Aug.* 21.
Beef cattle, ₩ lb	4½@6½	4½@6½	4 @6½	4 @6½
Sheep and lambs, in lots	$1½@3½	$2 @3½	$2½@3½	$2½@3½
Swine, stores, wholesale	4½@6	5½@	4 @5½	4½@5½
" " retail	5 @7	5 @7	4 @6½	5 @7
Dressed hogs	4½@5½	4½@5½	5½@	5½@

REMARKS.—Prices for beef cattle showed a downward tendency during the first three weeks of the above term, but there was not, in our opinion, sufficient depreciation to authorize a change of figures, further than to erase, as was done, from the list of prices after the first week, the statement then made that "a few extra Western steers may cost over 6½c." An addition of nearly 500 to the average supply for several previous weeks was reported for the week ending August 14th. Some three hundred of these arrived at market one day behind hand, and consequently after most of the butchers were well supplied. The result was that the late-comers and such remnants of droves as remained in the yards at the time of their arrival, had to be offered at prices considerably lower than cattle had been selling for, to induce purchasers to add to the stock already on their hands. Low as they were offered, however, they were not all sold, some 60 to 80 head being kept over to the next week, in the hands of the drovers. The cattle at market August 21st, both Northern and Western, were not only less in number, but they were smaller and inferior in quality. About 200 of the Northern cattle were stores, consisting of thin workers, milch cows, and young cattle, among which were some yearlings not as large as calves ought to be. In consequence of this short supply of beeves prices advanced from ½ to ½c ₩ lb.

The market for sheep and lambs has been quite uniform during the last four weeks. The frequent rains have kept the feed good, and a steady improvement has been noticed in the size and quality of the lambs offered for sale. There have been but few old sheep at market, and these have generally been sold with the lambs, within the range of prices quoted above.

The market for milkers may still be reported as rather dull. There have been but few workers brought in as yet, and there has been thus far, this season, but little inquiry for store cattle of any kind.

In consequence of a disease among swine, the trade in store pigs and shotes has become quite small, at Brighton, as will be seen by the number at market for the past month.

NEW HAMPSHIRE STATE AGRICULTURAL FAIR.—At a recent meeting of the Board of Directors of the N. H. Agricultural Society it was voted inexpedient to hold a State Fair the present Fall. The Directors of the Rockingham County Agricultural Association have passed a similar vote.